### **State of Wyoming**



## **Department of Health**

### **Binge Drinking in Wyoming**

Results from the 2003-2004 Wyoming Behavioral Risk Factor Surveillance System

Brent D. Sherard, M.D., M.P.H., Director

March 2006

## State of Wyoming Department of Health

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For more information about the Behavioral Risk Factor Surveillance System (BRFSS), visit the CDC website at <a href="http://www.cdc.gov/brfss">www.cdc.gov/brfss</a>, or the Wyoming BRFSS website at <a href="http://wdh.state.wy.us/brfss">http://wdh.state.wy.us/brfss</a>.

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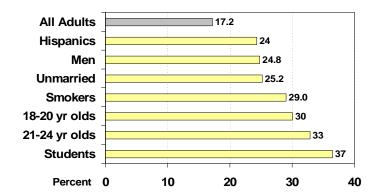
#### **Executive Summary**

The 2003 and 2004 Wyoming Behavioral Risk Factor Surveillance System (BRFSS) questionnaires included the standard questions about alcohol consumption, plus a series of questions about binge drinking. For anyone who reported binge drinking in the past month, these additional questions addressed the type and amount of liquor consumed, where the binge drinking occurred, where the alcohol was obtained, and if drinking and driving was involved. This report discusses binge drinking among Wyoming adults, and includes results for other types of drinking to place these results in context. In addition, the report also addresses underage drinking (by 18-20 year olds) and binge drinking in association with other risky behaviors.

A total of 8,173 randomly selected non-institutionalized adults 18 years and older were surveyed by telephone in the Wyoming BRFSS during 2003 and 2004. Results were adjusted for different probabilities of selection and further adjusted to represent the adult population in Wyoming by age and gender. Data for the two separate years were combined with no further adjustment.

Over half (58.1%) of all respondents reported having at least one drink of alcohol in the past 30 days. One in ten of those drinkers, or 5.5% of all respondents, reported heavy drinking, defined as an average of greater than one drink per day for women and greater than two drinks per day for men. Overall, 17.2% of respondents, or an estimated 65,000 Wyoming adults, reported binge drinking, including an estimated 6,000 who were below the legal drinking age. Binge drinkers represented 29.7% of all drinkers. Population groups that appeared to have high rates of binge drinking included students, younger adults, smokers, unmarried respondents, men, and Hispanics (see Figure below).

## Groups with High Binge Drinking Rates WY BRFSS 2003-2004



#### Other highlights of the findings:

- Among binge drinkers, two-thirds reported drinking 6 or more drinks on their last binge drinking occasion, including 25% who drank 10 or more drinks.
- Because heavy drinking was defined by the total number of drinks consumed in a
  month, heavy drinking and binge drinking were highly correlated. One fourth of
  binge drinkers were also heavy drinkers and 78% of heavy drinkers were binge
  drinkers.
- Beer was, by far, the most popular beverage among binge drinkers; 87% of all binge drinkers reported drinking beer alone or in combination with other types of drinks during their last binge drinking occasion.
- Forty percent of binge drinkers reported drinking more than one type of alcoholic beverage during their most recent episode of binge drinking, including 6% who drank all three types (beer, wine, and liquor).
- Over half of all binge drinkers reported binge drinking in someone's home, while 38% reported doing so in a commercial establishment.
- More than 15% of binge drinkers reported driving a motor vehicle during or shortly after the last binge drinking occasion.
- Binge drinking was reported by 30% of 18-20 year olds (those below the legal age for drinking). Among all drinkers, underage adults were twice as likely as those age 21 and older to report binge drinking (64% vs. 28% respectively).
- Compared with legal age binge drinkers, underage binge drinkers reported more drinks per episode, but not more binge drinking episodes in the past month. Virtually all (95%) of underage binge drinkers got their alcohol from friends or family and 80% did their binge drinking in someone's home.
- The binge drinking rate for Wyoming in 2004 was higher than the median for all states, and was in a tie for the eighteenth highest rate among the 49 states and the District of Columbia with comparable data.

#### I. Introduction

Abuse of alcohol is the third leading cause of preventable death in the U.S., accounting for an estimated 85,000 deaths each year, or about 3.5% of total deaths.1 This figure includes deaths from hazardous and harmful drinking (defined as greater than 6 drinks per day for men and 4 drinks per day for women). and binge drinking, consuming five or more drinks per occasion, with about half of the estimated deaths attributed to the latter. On the other hand, moderate drinking appears to offer certain health benefits, including lowering the risk cardiovascular disease and possibly reducing mortality risk.<sup>2,3,4</sup> To further complicate the issue, the legal age for alcohol consumption in Wyoming is 21, and therefore any drinking by Wyoming adults ages 18-20 is illegal. Binge and heavy drinking also tend to be associated with other risky behaviors such as smoking and drinking and driving.

The Behavioral Risk Factor Surveillance System (BRFSS) collects data from randomly selected non-institutionalized adults age 18 and older, through monthly telephone surveys. All 50 states currently conduct the survey, with the collaboration and support of the federal Centers for Disease Control and Prevention (CDC). The BRFSS regularly

addresses alcohol use on the core that are questions asked in participating states. Questions address frequency of having at least one drink of any alcoholic beverage in the past month, the number of drinks consumed per day, on average, and the number of times in the past 30 days when the respondent consumed 5 or more drinks on one occasion. In addition, the CDC has developed an optional module to specifically address binge drinking. Questions on this module address the type and amount of liquor consumed, where the binge drinking occurred, where the alcohol was obtained, and if drinking and driving was involved. Wyoming included this optional binge drinking module in both 2003 and 2004, when the core alcohol questions were also included.

This report primarily addresses the issue of binge drinking, but places that in the context of other common measures of alcohol consumption. Underage drinking by adults 18-20 years of age is also addressed, along with drinking and other risky behaviors. These other behaviors include smoking, having access to firearms in the household, and, for women, being at risk for pregnancy.

#### II. Methods

Wyoming conducted 4,004 BRFSS interviews in 2003 and 4,169 in 2004, using the established BRFSS protocol.<sup>5</sup> Following data collection, the results were adjusted by the CDC to account for different probabilities of selection, and further adjusted to be representative of the total adult population of Wyoming by age and gender. Because the sample sizes were similar, data for the two separate years were combined with no further adjustment, for a total sample size of 8,173.

Prevalence estimates and confidence intervals were determined with Stata version 8, which takes into account the complex sample design of the BRFSS. The 95% confidence interval, or margin of error, defines the range of values within which the true population prevalence rate would be expected to fall in 95 out of 100 samples taken from the population. Respondents with missing values were excluded from analysis of that variable, unless otherwise noted. Confidence intervals are presented in the Supplemental Tables S-1 through S-18 on pages 28-45 of the report. When comparisons such as "more likely" or "higher than" are made in the findings presented in the report, these results were statistically significant based on Chi square tests of association. This is noted in the Supplemental Tables by having P values < 0.05.

All estimates obtained from survey data are subject to errors from several sources. Measurement error may occur from survey inconsistencies, such as different interviewers reading a question in a slightly different manner. Data

entry errors are also possible, although computer assisted interviewing techniques were employed to minimize such errors. Non-response error is introduced when respondents refuse to answer, and recall error occurs when their memory of past events is inaccurate. There is also potential error involved in self-reporting information that the respondent may recognize as socially undesirable, such as drinking. While these types of errors cannot easily be measured for a particular survey, the sampling error, which results because only a fraction of the target population answers the questions, can be estimated. The confidence interval, described above, estimates sampling error and provides an indication of the precision of the survey results.

Another limitation is that these data are from a phone survey, and thus the homeless, persons in households without phones (or with only cell phones), and certain disabled persons are represented. In Wyoming, the rate of phone coverage is about 96% and generally is not a problem overall. Phone coverage may be an issue for deriving accurate estimates among lower income persons, certain demographic groups, or when the item of interest is likely to be much higher among those with no phones (such as drinking). College students living in dormitories, incarcerated persons, and adults in nursing homes are also not included in the sample. Declining response rates for telephone surveys are another concern. BRFSS response rates in general have declined from about 70% ten years ago to about 50% or less in recent years.

#### III. Results

A. Demographics of Sample

# Table 1 Demographics of Sample WY BRFSS 2003 & 2004 Combined Adults age 18 and older

|                | Unwei  | ghted  | Weighted   |   | Unweighted  |      | Weighted   |
|----------------|--------|--------|------------|---|-------------|------|------------|
|                | Respon | ndents | Population |   | Respondents |      | Population |
|                | N      | %      | %          |   | N           | %    | %          |
| Total          | 8,173  | 100    | 100        | Education   |             |      |            |
|                |        |        |            | <hs< td=""><td>543</td><td>6.7</td><td>7.3</td></hs<> | 543         | 6.7  | 7.3        |
| Sex            |        |        |            | HS grad   | 2,661       | 32.6 | 33.6       |
| Male           | 3,399  | 41.6   | 50.0       | Some coll.  | 2,661       | 32.6 | 32.6       |
| Female         | 4,774  | 58.4   | 50.0       | College grad  | 2,291       | 28.1 | 26.5       |
| Race/Ethnicity |        |        |            | Income  |             |      |            |
| White          | 7,414  | 91.6   | 90.6       | <\$25,000   | 2,066       | 28.0 | 26.0       |
| Hispanic       | 358    | 4.4    | 5.2        | \$25K-\$49,999  | 2,621       | 35.6 | 36.1       |
| Other          | 321    | 4.0    | 4.2        | \$50K-74,999  | 1,422       | 19.3 | 20.1       |
|                |        |        |            | \$75,000+   | 1,263       | 17.1 | 17.8       |
| Age            |        |        |            |   |             |      |            |
| 18-20          | 165    | 2.0    | 5.3        | Population density <sup>1</sup>                       |             |      |            |
| 21-24          | 380    | 4.7    | 9.2        | Ctys >50K   | 2,350       | 29.2 | 29.3       |
| 25-34          | 1,169  | 14.4   | 15.6       | Ctys 10K-50K  | 3,179       | 39.5 | 40.3       |
| 35-44          | 1,434  | 16.7   | 18.9       | Ctys <10,000  | 2,519       | 31.3 | 30.4       |
| 45-54          | 1,932  | 23.8   | 21.0       |   |             |      |            |
| 55-64          | 1,359  | 16.7   | 13.8       | Region <sup>2</sup>                                   |             |      |            |
| 65+            | 1,682  | 20.7   | 16.2       | Southeast   | 2,120       | 26.1 | 26.9       |
|                |        |        |            | Southwest   | 1,493       | 18.4 | 18.9       |
| Employment     |        |        |            | Northwest   | 1,225       | 15.1 | 14.2       |
| Employed       | 5,258  | 64.5   | 66.7       | Northeast   | 1,373       | 16.9 | 16.8       |
| Out of work    | 541    | 6.6    | 6.4        | Central   | 2,912       | 23.5 | 23.2       |
| Homemaker      | 687    | 8.4    | 8.1        |   |             |      |            |
| Student        | 206    | 2.5    | 4.5        | Marital status  |             |      |            |
| Retired        | 1,458  | 17.9   | 14.3       | Married   | 4,883       | 59.9 | 65.4       |
|                |        |        |            | Not married   | 3,273       | 40.1 | 34.6       |
|                |        |        |            |   |             |      |            |

Weighted population %s are approximate, from weighted BRFSS data.

Southwest = Carbon, Lincoln, Sweetwater, Sublette, Uinta.

Northwest = Big Horn, Hot Springs, Park, Teton, Washakie.

Northeast = Campbell, Crook, Johnson, Sheridan, Weston.

Central = Converse, Fremont, Natrona, Niobrara.

Totals may not add to 100% (or 8,173) due to rounding (or missing values).

<sup>&</sup>lt;sup>1</sup> Ctys >50K = Laramie and Natrona counties; Ctys10K-50K = Albany, Campbell, Fremont, Sheridan, Sweetwater, Teton, and Uinta counties; Ctys <10,000 = all other Wyoming counties.

<sup>&</sup>lt;sup>2</sup> Southeast = Albany, Goshen, Laramie, Platte.

#### B. Context of Binge Drinking

Measures: Any drinking: Respondents were asked "During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage?" Any drinking was defined as reporting one or more days in the past month in response to this question, while those who reported none, were considered to have had no drinks in the past 30 days and to be non-drinkers. Heavy drinking: Women who reported an average of greater than one drink per day, and men who reported an average of greater than 2 drinks per day were considered heavy drinkers.

#### Highlights:

- 58.1% of Wyoming respondents reported any drinking in the past month.
- One in ten drinkers reported heavy drinking, representing 5.5% of all adults.
- Heavy drinking was high among young adults, those who didn't finish high school, non-married persons, and the out-of-work.

Nearly three in every five adults (58.1%) reported any drinking in the past month, with rates significantly higher among men (63.9%), 21-24 year olds (70%; Figure 1), 25-34 year olds (66.4%), college graduates (66.6%), those with incomes of \$75,000 and higher (69.2%), residents of metropolitan counties (61.0%), the Southeast (62.9%) and

Northwest (60.5%) Regions, employed adults (64.2%), and students (64%). Groups with low rates of any drinking (below 50%) include homemakers (38.9%), adults who are out of work (42.3%), those age 65 and older (42.8%; Figure 1), the retired (46.5%), those below the legal age of drinking (ages 18-20; 47%), and those with less than a high school education (47.4%). Any drinking in the past month was not associated with race/ethnicity or marital status. Over half (51.9%) of female drinkers and one third (33.9%) of male drinkers reported they drank an average of one drink per day on the days when they drank.

The prevalence of heavy drinking, as defined above, was 5.5% overall, with similar rates for men and women. Heavy drinking was associated with education, age, marital status and employment, but was generally unaffected by other demographic factors. Compared with married persons, heavy drinking was over twice as likely among non-married adults (8.7% vs. 3.9%). Other high rates of heavy drinking were reported by 21-24 year olds (9%; Figure 2), students (8%), those out of work (7.6%), and 18-20 year olds (8%). Heavy drinking rates in Wyoming were higher in 2003 than in 2004 (6.6% vs. 4.5%), while any drinking rates were similar in both years. Both rates in Wyoming in 2003 were higher than the median value among all states.

Figure 1.

## Any Drinking by Age Group WY BRFSS 2003-2004

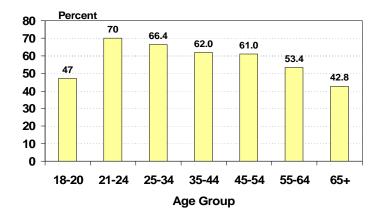
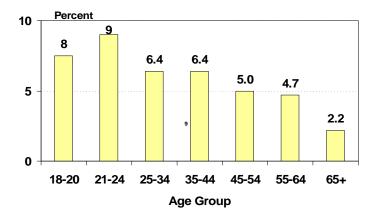


Figure 2.

### Heavy Drinking by Age Group WY BRFSS 2003-2004



## C. Binge Drinking 1. Prevalence

Measure: Binge drinking: Respondents who reported any drinking were asked how many times during the past 30 days they had 5 or more drinks on an occasion. All types of alcoholic beverages were to be considered. Those who reported at least one time during the past 30 days when they had 5 or more drinks on an occasion were considered binge drinkers. This is reported as a percentage of drinkers and also as a percent of all respondents.

#### Highlights:

- 29.7% of drinkers or 17.2% of all Wyoming respondents, reported binge drinking
- Men, younger adults, students, and unmarried persons were most likely to report binge drinking.

Binge drinking was reported by 29.7% of all drinkers, representing an estimated 65,000 persons or 17.2% of all Wyoming adults. As was the case for heavy drinking, binge drinking rates were higher in 2003 than in 2004.

Binge drinking rates (as a percent of all adults) were higher among men (24.8%), young adults (33% for 21-24 year olds and 30% for 18-20 year olds; Figure 3), students (37%; Figure 4), unmarried persons (25.2%), and Hispanics (24.3%). Many of these groups overlap, as students and unmarried persons will tend to be younger.

Binge drinking rates were relatively low among women (9.6%), older adults (2.8% for those 65 and older and 9.3 % for those 55-64; Figure 3), and for

groups representing these categories, such as homemakers (4.8%; Figure 4) and the retired (4.4%). Rates were significantly lower among college graduates (14.4%) and rural residents (14.6%). Binge drinking as a percent of all adults was not associated with region of the state or household income.

Results for binge drinking taken as a percentage of drinkers instead of as a percentage of all adults were similar, with some notable exceptions. As mentioned above, binge drinking was unaffected by income, while rates for any drinking increased with increasing income. The net result was that binge drinking among drinkers decreased with increasing income. Results for education were similar to those for income, except in this case binge drinking as a percent of all adults was also significantly related to education.

Because heavy drinking was defined by the total number of drinks consumed in a month, heavy drinking and binge drinking were highly correlated. One fourth of binge drinkers were also heavy drinkers and 78% of heavy drinkers were binge drinkers. This would apply especially to binge drinkers who reported more drinks per occasion and/or more episodes per month.

Wyoming binge drinking rates in 2004 were compared with rates in the other 49 states and the District of Columbia. Those rates ranged from 8.2% in Tennessee to 21.8% in Wisconsin, with a median value of 15.1%. The Wyoming rate of 16.2% in 2004 placed it in a tie for eighteenth highest among the 49 states and the District of Columbia with comparable data.

Figure 3.

### Binge Drinking by Age Group WY BRFSS 2003-2004

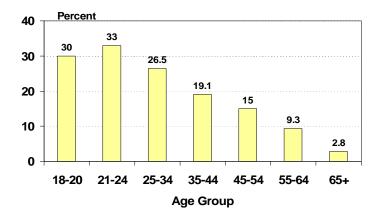
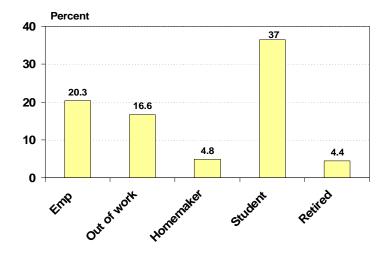


Figure 4.

## Binge Drinking by Employment WY BRFSS 2003-2004



## 2. Number of drinks /number of occasions

Within the Binge Drinking Measure: Module, binge drinkers were asked "During the most recent occasion when you had 5 or more alcoholic beverages, about how many beers, including malt liquor, did you drink?" Separate and similar questions addressed wine (including wine coolers, hard lemonade or hard cider) and liquor (including cocktails). Responses for the three questions were totaled to determine the number of drinks per episode. The number of binge drinking occasions was determined from the core question that was used to measure binge drinking.

#### Highlights:

- Two-thirds of binge drinkers reported drinking 6 or more drinks on their last binge drinking occasion, including 24.7% who drank 10 or more drinks.
- Three in five (59.4%) binge drinkers reported binge drinking one or 2 times in the past month, while 29.9% reported 3-9 episodes, and 10.7% reported 10 or more.

A total of 1,163 binge drinkers were asked the Binge Drinking Module in 2003 and 2004. Although binge drinking was defined as 5 or more drinks on an occasion, 7.8% of binge drinkers reported drinking fewer than 5 drinks on their last binge drinking occasion. One quarter (24.7%) of binge drinkers reported consuming 10 or more alcoholic beverages on their last binge drinking occasion, while 25.3% reported drinking 7-9 drinks, 19.3% reported drinking 6 drinks and 22.8% reported consuming five. Results for all binge drinkers and for men and women are shown in Figure 5. Younger binge drinkers, those who were unmarried, and those with less education were likely to drink more drinks per occasion than other binge drinkers. A small percentage (n=42) of respondents to the binge drinking module reported drinking fewer than 5 drinks on their last binge drinking occasion and also only reported one occasion in the past month. While these may or not represent binge drinkers, their responses were included in the analysis of the module.

While all respondents were asked about the number of binge drinking occasions in the past month, results are presented only for the 1,163 binge drinkers. Over one third of binge drinkers (36.7%) reported a single binge drinking episode in the past month, 22.7% reported two, 29.9% reported 3-9, and 10.7% reported 10 or more. Results were different for men and women as shown in Figure 6. Less educated and non-married, but not younger, binge drinkers were more likely to report more binge drinking episodes in the past month.

Among binge drinkers, the number of drinks per occasion and the number of occasions in the past 30 days were directly associated. That is, persons who reported more occasions also tended to report more drinks per occasion. For example, among binge drinkers who reported a single occasion of binge drinking in the past month, 39% reporting drinking 5 or fewer alcoholic beverages on that occasion, and 17% reported consuming 10 or more drinks. Among binge drinkers who reported 10 or more occasions of recent binge drinking, only 18% reported drinking 5 or fewer drinks during their most recent episode, while 37% reported drinking ten or more drinks (data not shown).

Figure 5.

### Number of Drinks per Occasion WY BRFSS 2003-2004, Among Binge Drinkers

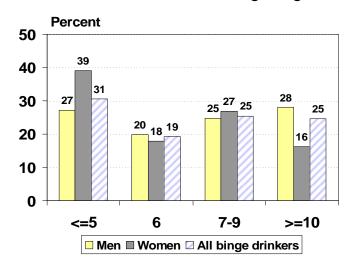
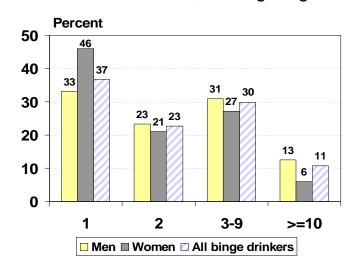


Figure 6.

### Number of Binge Drinking Occasions WY BRFSS 2003-2004, Among Binge Drinkers



#### 3. Types of Alcohol Consumed

Measure: From three separate questions within the Binge Drinking Module about the number of drinks of each type consumed on the most recent binge drinking occasion (beer, wine or liquor), responses were combined to determine the percent of binge drinkers who consumed only beer, only wine, only liquor, or combinations of types of drinks.

#### Highlights:

- Beer was, by far, the most popular beverage among binge drinkers; 86.8% of all binge drinkers reported drinking beer alone or in combination with other types of drinks.
- Forty percent of binge drinkers reported drinking more than one type of alcoholic beverage during their most recent episode of binge drinking, including 5.9% who drank all three types.

Beer was the overwhelming favorite beverage among binge drinkers, with 86.8% of all binge drinkers reporting drinking beer either alone (Figure 7) or in combination with other drinks during their most recent binge drinking episode (Figure 8). Nearly half (48.9%) of all binge drinkers drank only beer when they last binge drank, 27.6% drank beer and liquor, and 10.8% drank beer with wine or both wine and liquor. Liquor was in second place, reported by 43.2% of all binge drinkers, while wine at 14.3% was a distant third (Figure 7). Each of these latter two types of beverages was more popular in with other combination drinks, especially beer, than alone (Figure 8).

Patterns of drinking were very different for men and women, as shown in Figures 7 and 8. Men, younger binge drinkers and students were more likely to report drinking beer when they drank 5 or more drinks on an occasion. Women were twice as likely as men to report wine drinking during a binge drinking episode. No other demographic groups showed significant associations with wine drinking. Women, non-married persons, and younger binge drinkers (but not students) were more likely to report drinking liquor on their most recent binge drinking occasion. Minority binge drinkers (Hispanics and those of "other" race/ethnicities) were more likely than non-Hispanic whites to report drinking all three types of alcoholic beverages. were no differences There race/ethnicity for the three types of alcohol when examined separately (any beer, any wine, or any liquor).

Beer was especially popular among binge drinkers who drank 6 or more drinks during their last episode of binge drinking; over 90% of such binge drinkers reported consuming Liquor was also more likely to be consumed as the number of drinks increased, to a high of 65% among those who consumed ten or more drinks on their last occasion of binge drinking. This is consistent with the increase in multiple types of beverages as the quantities increased. At ten or more drinks per occasion, only one-third of binge drinkers confined themselves to a single type of drink, and 13% reported consuming all three types.

Figure 7.

### Type of Beverage by Sex WY BRFSS 2003-2004, Among Binge Drinkers

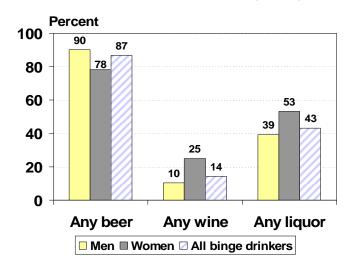
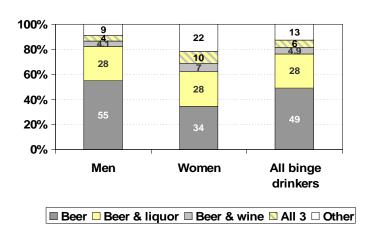


Figure 8.

### Beverage Combinations by Sex

WY BRFSS 2003-2004, Among Binge Drinkers



#### 4. Where Binge Drinking Occurred

Measure: A question in the Binge Drinking Module asked "During this most recent occasion, where were you when you did most of your drinking?" Response categories included: at home, at another person's home, a restaurant or banquet hall, a bar or club, a public place such as a park, concert or sporting event, or other. Categories with few responses were combined as follows: "restaurant" and "bar or club" were combined to "commercial place", and "public place" was combined with "other".

#### Highlights:

- About one-third (35.9%) of binge drinkers drank at home, over one-third drank at a commercial place such as a bar or restaurant, 16.1% drank at someone else's home and 10.4% reported consuming their drinks at some other place.
- Location of binge drinking varied by all demographic groups except by educational attainment, and by type of drink, but was similar for different number of episodes and the number of drinks per occasion.

Over half of all binge drinking was done in the home, either the binge drinker's own home (35.9%) or someone else's (16.1%). The single most popular location for binge drinking was a commercial establishment such as a bar or restaurant, reported by 37.6% of binge drinkers. Women were more likely than men to drink in bars and restaurants and less likely to binge drink at home (Figure 9). Drinking at home was directly related to age, increasing from 26% for 18-29

year old binge drinkers to 47% for binge drinkers age 50 and older (Figure 10). At the same time, drinking in someone else's home decreased with age, from 25% for the 18-29 year olds to 9% for binge drinkers age 50 and older. The other locations were fairly consistent for the three age groups.

Married binge drinkers were most likely to binge drink at home (reported by 43.6%), while unmarried binge drinkers were most likely to report drinking at a bar or other commercial establishment (43.4%). Compared to married binge drinkers, unmarried binge drinkers were nearly twice as likely to report drinking in someone else's home (20.7% vs. 11.5%). Hispanic binge drinkers were twice as likely as non-Hispanic white binge drinkers to drink in someone else's home (31% vs. 15.4%), while only 5% of other race/ethnic groups reported that location for their binge drinking.

There was no association between the location of binge drinking and either the number of binge occasions in the past month, the number of drinks on the last occasion, or consumption of wine. But the location of binge drinking and the type of beverage consumed were related. Beer drinkers were more likely to consume the beer at someone's home (53% vs. 41%) and less likely to drink at a commercial establishment (36% vs. 51%) compared with non-beer drinkers. Just the opposite was true for binge drinkers who drank liquor, 48% of whom drank in a bar or restaurant, or other commercial place, compared with 29.5% of non-liquor drinkers.

Figure 9.

### Location of Binge Drinking WY BRFSS 2003-2004, Among Binge Drinkers

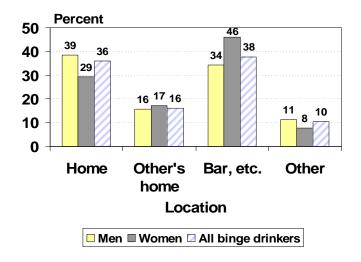
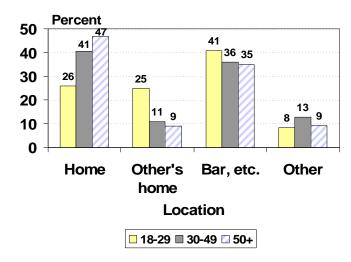


Figure 10.

### Location of Binge Drinking by Age WY BRFSS 2003-2004, Among Binge Drinkers



#### 5. How the Alcohol was Obtained

Measure: A question in the Binge Drinking Module asked "During this most recent occasion, how did you get most of the alcohol?" Response categories included: someone else bought it for me or gave it to me, bought in a store, bought at a restaurant, bar or public place, or other. Categories were not combined for analysis.

#### Highlights:

- Nearly 80% of binge drinkers reported buying most of their alcohol, either in a store (43.1%) or a bar, restaurant, or public place (36.1%).
- Patterns varied by demographic factors, with younger persons, students, and unmarried binge drinkers more likely than older or married drinkers to get their alcohol from someone else.

The most frequently reported source of alcohol was buying it in a store (43.1%), followed by purchasing in a bar, restaurant, or other public place (36.1), with getting from someone else a distant third (17.3%; Figure 11). Thus 79.2% reported purchasing most of the alcohol themselves. Men were slightly more likely than women to report buying the alcohol for their most recent binge drinking occasion themselves (80.8% vs. 75.3%). The percentage of binge drinkers who reported getting the alcohol from someone else was highest among younger binge drinkers and demographic groups representing younger persons. example, 41% of students, 28% of 18-29 year olds, and 24.9% of unmarried binge drinkers reported getting the drinks from someone else. Binge drinkers with

incomes <\$25,000 were twice as likely as those in the higher income groups to report getting the alcohol from someone else (26% vs. 13%).

There was no association between the number of binge drinking occasions in the past month and the source of the alcohol for the most recent one, but there was an association with the number of drinks per occasion. As the number of drinks increased, the percentage of binge drinkers who got their drinks from someone else also increased, from 12% for those who drank 5 or fewer drinks, to 25% for consumers of 10 drinks or more, with concomitant decreases in buying from a store.

Not unexpectedly, there was a close association between the location of drinking and the source of the alcohol for the most recent binge occasion (Figure 12). About 89% of binge drinkers who bought most their alcohol in a store reported consuming it in their own or someone else's home. And 84% of binge drinkers who reported getting their alcohol in a bar or other commercial establishment reported doing most of their binge drinking there. Over half (57%) of those who got their alcohol from someone else drank it at someone's home, but 31% reported consuming it at a commercial place, suggesting that the drinks were being purchased for them.

In summary, thirty percent of all binge drinkers bought their alcohol in a store and drank at home, and another 30% bought and drank their alcohol at a bar, restaurant or other commercial place, accounting for 60% of all binge drinkers.

Figure 11.

Source of Alcohol WY BRFSS 2003-2004, Among Binge Drinkers

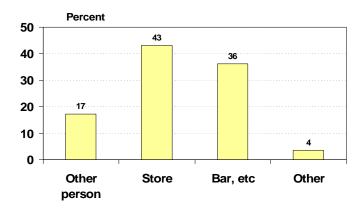
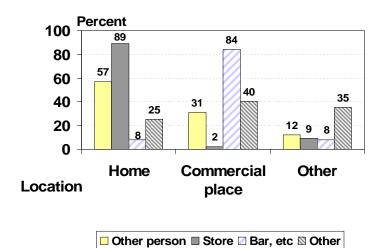


Figure 12.

## Location of Drinking by Source of Alcohol WY BRFSS 2003-2004, Among Binge Drinkers



#### 6. Drinking and Driving

Measures: The last question in the Binge Drinking Module asked "Did you drive a motor vehicle, such as a car, truck, or motorcycle during or within a couple of hours after this occasion?" Within the core survey in 2004, all drinkers were asked "During the past 30 days, how many times have you driven when you've had perhaps too much to drink?"

#### Highlights:

- The prevalence of driving within a couple of hours of binge drinking was 15.4% among binge drinkers.
- Binge drinkers were over ten times as likely to report driving when they might have had too much to drink as drinkers who were not classified as binge drinkers (14.3% vs. 1.2%; 2004 only).
- Nearly 27,000 episodes of drinking and driving were estimated to occur in Wyoming in an average month.

Nearly one in every six (15.4%) binge drinkers reported that they had driven a motor vehicle within a couple of hours of their most recent binge drinking occasion. This rate was higher for unmarried persons (17.8% vs. 12.9% for married persons), and for persons with only a high school diploma (19.7%). This measure was not significantly associated with other demographic factors.

The location of the binge drinking appeared to be the most important factor in the reporting of driving near the time of the binge episode (Figure 13). Over one-fourth (27%) of binge drinkers who drank at commercial establishments such as a bar or restaurant reported driving in close proximity to the drinking, compared with 4% of binge drinkers who drank at home.

The type or amount of alcohol or the number of occasions of binge drinking did not affect this measure.

The results for this measure on the Binge Drinking Module were compared with the results for the similar question that was asked of all drinkers in the core in 2004. Among all drinkers, 4.8% reported driving when they had perhaps too much to drink. This rate was about twice as high for male drinkers as for females (6.3% vs. 3.1%; data not shown). Comparing binge drinkers to non-binge drinkers for this measure, 14.3% of binge drinkers reported driving when they had perhaps too much to drink, compared with only 1.2% of non-binge drinkers (Figure 14). Phrased another way, 82% of drinkers who reported drinking and driving were binge drinkers. Based on the number of times respondents reported drinking driving in the past 30 days, nearly 27,000 episodes of drinking and driving were estimated to occur in Wyoming per month, or an average of about 2.5 times for each adult who drank and drove.

The value of 14.3% for the core drinking and driving question reported by binge drinkers was very similar to the 13.8% of binge drinkers who reported driving near the time of their binge drinking when asked within the binge drinking module in 2004. Interestingly, about 2% of all drinkers who did not report drinking and driving on the core, did report driving near the time of a binge drinking episode when asked in the Binge Drinking Module. These 45 binge drinkers represent over half of all binge drinkers who reported driving within a couple of hours of their most recent binge drinking episode.

Figure 13.

## Driving after Binge Drinking by Location of Drinking

WY BRFSS 2003-2004, Among Binge Drinkers

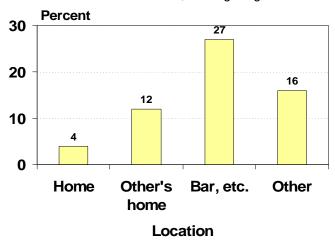
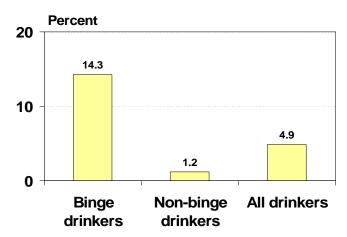


Figure 14.

## Driving after Drinking\* WY BRFSS 2004 Only, Among All Drinkers



 $<sup>^{\</sup>star}$  Driving after you have had perhaps too much to drink in the past 30 days

#### D. Underage Drinking

Measure: Underage drinkers were defined as those who reported their age as 18, 19, or 20 years, because the legal age for drinking in Wyoming is 21.

#### Highlights:

- Nearly half of 18-20 year olds reported any drinking, 8% reported heavy drinking, and 30% were binge drinkers.
- Underage drinkers were more likely than legal age drinkers to report binge drinking (64% vs. 28.2%), heavy drinking (16% vs. 9.3%), and drinking and driving as asked in the core (15% vs. 4.5%).
- Compared with binge drinkers age 21 and older, underage binge drinkers drank more drinks per occasion, were much more likely to drink in someone else's home, and were much more likely to get the alcohol from someone else.

Two percent of all respondents (N=165) reported their age as 18-20 years, representing 5.3% of the weighted survey sample. Nearly half, (47%) reported any drinking in the previous 30 days, 8% reported heavy drinking, 30% were binge drinkers. The binge drinking rate among 18-20 year olds was significantly higher than the rate among adults age 21 and older, while the rate for any drinking was significantly lower, and heavy drinking rates were similar. Considering only the population of drinkers, binge drinking, heavy drinking, and drinking and driving were all significantly higher for 18-20 year olds than among drinkers age 21 and older. (Figure 15).

Although the total number of underage binge drinking respondents was less than 50, estimated to represent 6,000 young Wyoming adults, these results were cautiously compared with binge drinkers age 21 and older. The underage binge drinkers reported more drinks per occasion (Figure 16), but not more occasions in the past month, than older binge drinkers. Half of all underage binge drinkers reported drinking 10 or more drinks on their last occasion compared with 22.4% of binge drinkers age 21 and older. While 42.8% of all drinkers age 21 and older reported drinking an average of one drink a day on the days they drank, only 22% of underage drinkers did.

Types of beverage consumed during the most recent binge drinking occasion appeared to be similar for the two age groups. Compared with older binge drinkers, underage binge drinkers were more likely to drink in someone else's home (58% vs. 12.0%) and less likely to binge drink in a commercial establishment (12% vs. 40.2%). Twothirds (67%) of underage binge drinkers reported getting their alcohol from someone else. Reported rates of driving within a couple of hours of the most recent binge drinking episode were similar for both groups. This result is in contrast to the result for drinking and driving among all drinkers as asked earlier in the 2004 survey, where drinkers age 18-20 were more likely than older drinkers to report drinking and driving (15% vs. 4.5% for those 21 and older; Figure 15).

Figure 15.

## Underage Drinking WY BRFSS 2003-2004, Among All Drinkers

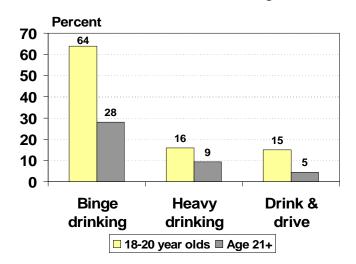
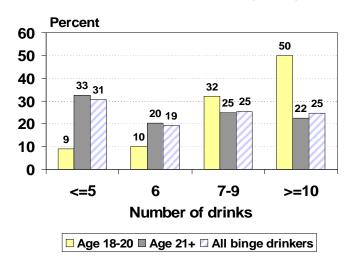


Figure 16.

### Number of Drinks per Occasion WY BRFSS 2003-2004, Among Binge Drinkers



## E. Drinking and Other Risk Factors1. Smoking

Measure: Current smokers were those who reported having smoked 100 cigarettes in their lifetime and they currently smoked daily or some days. Smoking and drinking of any type was considered to be a risk.

#### Highlights:

- Compared with non-smokers, current smokers were significantly more likely to report any drinking, heavy drinking, and binge drinking.
- Nearly 15% of all respondents reported smoking and any drinking and 6.7% reported both current smoking and binge drinking.

Nearly one in every four (23.2%) Wyoming respondents reported current smoking in 2003-2004. Rates were similar for men and women, but were higher for younger adults, non-married persons, non-whites, the out-of-work, those with less education and persons in lower income groups.

Excessive alcohol consumption and tobacco use are each associated with an increased risk of oral cancers and they react synergistically to increase this risk even more. Their use appears to also be related; compared with non-smokers, Wyoming smokers were more likely to report any drinking (64.5% vs. 56.2%), heavy drinking (11.1% vs. 4.0%) and binge drinking (29.0% vs. 13.6%) (Figure 17). A total of 14.9% of all respondents

reported current smoking and drinking and 6.7% reported current smoking and binge drinking.

Patterns of smoking and binge drinking were similar to patterns for binge drinking reported earlier. Men were significantly more likely than women to smoke and binge drink (8.7% vs. 4.7%). Younger adults were also more likely to smoke and binge drink than older adults (13.7% for 21-24 year olds vs. 0.9% for those 65 and older; Figure 18), and smoking and binge drinking were inversely related to education and income level. Non-married persons were nearly 3 times as likely to report smoking and binge drinking (11.2% vs. 4.3%) as married persons. Similar patterns were seen in the results for smoking and any drinking.

Groups with relatively low rates of smoking and binge drinking (or smoking and any drinking) included non-Hispanic whites (6.3% vs. 10% or more for Hispanics or those of other races), homemakers (2.9%), retirees (1.5%), and residents of the least densely populated counties (5.5%). Results by region were mixed; residents of the Central and Southeast Regions were more likely to smoke and drink, but there were no regional differences in smoking and binge drinking. Compared with older adults, those ages 18-20 were no more or less likely to smoke and drink or smoke and binge drink.

Figure 17.

## Drinking & Smoking WY BRFSS 2003-2004

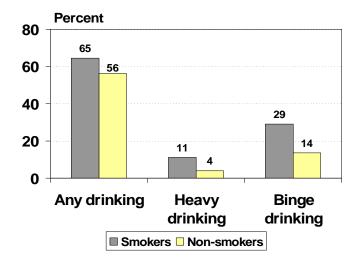
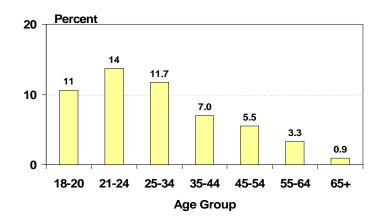


Figure 18.

## Smoking & Binge Drinking by Age Group WY BRFSS 2003-2004



#### 2. Firearms and Drinking

Measure: In 2004, all respondents were asked if there were any firearms kept in or around their home. Additional questions asked if the firearms were loaded and/or unlocked. Binge drinking by someone with a firearm in the home, especially one that was loaded and/or unlocked, was considered to be an injury risk.

#### Highlights:

- Two-thirds of respondents (65.5%) reported a firearm in the home.
- Loaded firearms were reported by 14.5% of all respondents and loaded and unlocked firearms were reported by 9.2%.
- One in ten binge drinkers lived in a home with a loaded and unlocked firearm, a rate similar to that for non-binge drinkers.

Homicide and suicide have both been found to be associated with having guns in the home. <sup>7</sup> In addition, both chronic and binge drinking are associated with suicidal behavior. <sup>8</sup> Based on these findings, having a gun in the home – especially one that was loaded or loaded and unlocked – in combination with binge drinking was considered to increase the risk of injury, particularly suicide.

Gun ownership was extremely common in Wyoming, with 65.5% of all respondents reporting any firearms in or around the home. Loaded firearms were reported by

14.5% of respondents and loaded and unlocked firearms were reported by 9.2%. For all three measures, even though the respondent was reporting on the household, rates were significantly higher as reported by men compared with women. Middle-aged, married, higher income and employed adults and residents of counties with population less than 10,000 reported relatively high rates of having a loaded and unlocked firearm.

Binge drinkers were significantly more likely than non-binge drinkers to report a firearm in the home (69.9% vs. 64.7%) and to report a loaded gun (18.5% vs. 13.6%) but not a loaded and unlocked gun (10.3% vs. 8.9%; Figure 19). Over one in every ten respondents (11.3%) was a binge drinker with a gun in the home. This rate was much higher for men (17.9% of men vs. 4.9% of women), younger adults (15%-18%), unmarried persons (13.9%), students (16%) the out- of-work (17%), and those with incomes \$50,000-\$74,999 (15.6%). The total prevalence of binge drinking with a loaded firearm in the home was 3.0% and for binge drinking with a loaded and unlocked firearm in the home it was 1.7%, with both rates higher among men (Figure 20). This latter rate was also high among 35-44 year olds (2.1%) and 45-54 year olds (3.1%) but was unrelated to other demographic factors.

Figure 19.

## Firearms and Binge Drinking WY BRFSS 2004

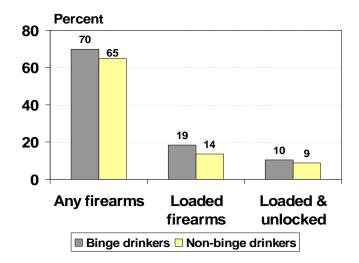
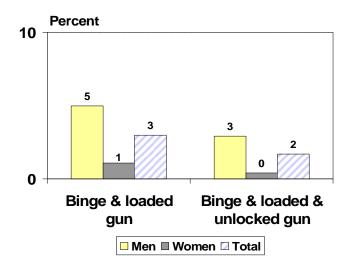


Figure 20.

## Binge Drinking and Firearms WY BRFSS 2004



#### 3. Pregnancy Risk and Drinking

Measure: In 2004, all respondents were asked about birth control, and women 18-44 were asked if they were pregnant. Women age 18-44 were considered at "risk" of pregnancy if they were already pregnant, or if they were sexually active, had not had a hysterectomy and were not using birth control. The term "risk" is not used here in the usual sense, but refers to women who were either trying to become pregnant or chancing a pregnancy by not using birth control (or they were already pregnant).

#### Highlights:

- Nearly one in every five women age 18-44 were either pregnant, trying to become pregnant, or chancing a pregnancy in 2004.
- Over 40% of these women who were at risk of becoming pregnant drank alcohol in the past month, 9% reported binge drinking, and 5% reported heavy drinking.
- Among pregnant women, 18% drank alcohol in the past month, 5% binge drank, and 3% reported heavy drinking.

Alcohol can pose a considerable risk for the unborn fetus, causing a range of problems including premature birth, low birth weight, growth deficits, and learning disabilities. The latest recommendations from experts are that pregnant women and those trying to get pregnant should consume no alcohol at all. In 2004 nearly one in every five (19.7%) Wyoming women age 18-44 were either pregnant, trying to become pregnant, or chancing a

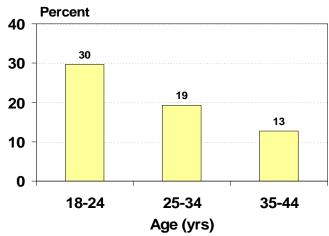
pregnancy by not using birth control. Rates were higher among women 18-24 years of age (29.7%; Figure 21), married women (23.5%), and women in the Northeast Region (32%), but were unaffected by race, income, education, or other factors examined.

Among the 154 respondents who were deemed to be at risk for pregnancy (or already pregnant), 42% reported any drinking in the past month, 9% reported binge drinking, and 5% reported heavy drinking (Figure 22). In the case of any alcohol in the past month, women at risk of pregnancy were significantly less likely than women not at risk to report drinking. For binge and heavy drinking, both groups of women reported similar rates. Thus over 8% (42% times 19.7%) of all Wyoming women of childbearing age were considered to be at risk for complications pregnancy due consuming alcohol. Of course, it is unlikely that all the women at "risk" will become pregnant in the immediate future, and some may stop consuming alcohol if and when that occurs. Because the number of women who fell in this category was relatively small, no patterns were found by demographic factors (data not shown).

Among the 79 women who reported that they were already pregnant (2003 and 2004 combined), 18% reported any drinking in the past month, 5% reported binge drinking, and 3% reported heavy drinking.

Figure 21.

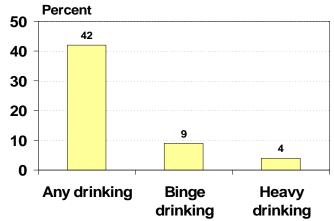
## Women age 18-44 at Risk for Pregnancy\* WY BRFSS 2004



<sup>\*</sup> Women who were pregnant, or those who had not had a hysterectomy and were sexually active and not using birth control

Figure 22.

Drinking among
Women age 18-44 at Risk for Pregnancy\*
WY BRFSS 2004



<sup>\*</sup> Women who were pregnant, or those who had not had a hysterectomy and were sexually active and not using birth control

#### IV. Summary & Discussion

Based on the BRFSS results presented here, binge drinking is a significantly Wyoming problem among adults. Compared with other states in 2003 and 2004, the prevalence of binge drinking was well above the median for all 50 states, although Wyoming's rate fell to average in 2005. Particular areas of concern for alcohol use in general include drinking of any kind by underage drinkers, drinking and driving, and persons who consume large numbers of drinks on a binge drinking occasion and/or report frequent episodes. Groups with high selfreported rates of binge drinking include students, younger adults, men, unmarried persons, and Hispanics.

Binge drinking in combination with other risk factors is also a concern. Smoking and drinking of any kind increases the risk for certain cancers, and smokers are among the groups with high rates of binge drinking. Binge drinking in homes with firearms can be a potential injury risk, and binge drinkers were more likely than nonbinge drinkers to report firearms and loaded firearms in the home. drinking by pregnant women or women who might become pregnant can increase the risk of pregnancy complications or harm to the fetus. Significant numbers of pregnant women and those who might become pregnant reported recent alcohol consumption.

Efforts at reducing the rate of binge drinking and other alcohol-related risky

behaviors can take advantage information in this report. Such information includes high risk groups for binge drinking, where binge drinkers are getting their alcohol, where they are consuming it, and characteristics of underage drinkers. Because several of the issues involve illegal activities (drinking by those under age 21 and drinking and driving), regulation and enforcement will be key strategies in a comprehensive plan for improvement.

Several significant efforts to reduce the prevalence of binge drinking and its adverse effects are currently underway in Wyoming. The federally funded Strategic Planning Framework / State Incentive Grant is providing up to \$1.9 million annually through 2009 to county-based projects to address the misuse of alcohol, including underage drinking and both youth and adult binge drinking. Recent state legislation requires alcohol compliance checks and trainings with alcohol retailers to reduce sales of alcohol to underage persons. The Wyoming First Lady's Initiative to Reduce Underage Drinking actively youth in community and engages statewide alcohol reduction initiatives with a particular focus on issues surrounding initial alcohol use. The Governor's Planning Office manages the Enforce Underage Drinking federal grant and coordinates efforts closely with the Wyoming First Lady's Initiative and the Mental Health and Substance Abuse Services Division of the Wyoming Department of Health. Supplemental Tables

Table S-1 Any Drinking\* by Demographics WY BRFSS 2003-2004, all adults 18+

|                |       | Any drink | king      |  | Any drinking |          |           |
|----------------|-------|-----------|-----------|--|--------------|----------|-----------|
|                | N     | %         | 95% CI    |  | N            | %        | 95% CI    |
| Total          | 8,140 | 58.1      | 56.9-59.3 | Education  |              |          |           |
|                |       |           |           | <hs< td=""><td>535</td><td>47.4</td><td>42.4-52.6</td></hs<> | 535          | 47.4     | 42.4-52.6 |
| Sex            |       |           |           | HS grad  | 2,655        | 53.1     | 50.9-55.4 |
| Male           | 3,377 | 63.9      | 62.0-65.7 | Some coll.   | 2,646        | 58.7     | 56.5-60.8 |
| Female         | 4,763 | 52.4      | 50.8-54.0 | College grad   | 2,288        | 66.6     | 64.4-68.7 |
| P value        |       | < 0.001   |           | P value  |              | < 0.0001 |           |
| Age            |       |           |           | Income   |              |          |           |
| 18-20          | 164   | 47        | 39.0-55.7 | <\$25,000  | 2,055        | 50.3     | 47.7-53.0 |
| 21-24          | 376   | 70        | 64.9-74.8 | \$25K-\$49,999   | 2,618        | 57.6     | 55.5-59.8 |
| 25-34          | 1,168 | 66.4      | 63.4-69.3 | \$50K-74,999   | 1,417        | 64.7     | 61.9-67.4 |
| 35-44          | 1,429 | 62.0      | 59.2-64.7 | \$75,000+  | 1,258        | 69.2     | 66.3-72.0 |
| 45-54          | 1,925 | 61.0      | 58.5-63.4 | P value  |              | < 0.0001 |           |
| 55-64          | 1,355 | 53.4      | 50.5-56.3 | Population density <sup>1</sup>                              |              |          |           |
| 65+            | 1,674 | 42.8      | 40.2-45.4 | Ctys >50K  | 2,343        | 61.0     | 58.8-63.3 |
| P value        |       | < 0.001   |           | Ctys 10K-50K   | 3,163        | 59.0     | 56.9-60.9 |
| Race/Ethnicity |       |           |           | Ctys <10,000   | 2,509        | 54.3     | 52.0-56.5 |
| White          | 7,386 | 58.3      | 57.0-59.5 | P value  |              | 0.0001   |           |
| Hispanic       | 356   | 61        | 55.1-66.7 | Region <sup>2</sup>  |              |          |           |
| Other          | 320   | 53        | 46.1-59.1 | Southeast  | 2,112        | 62.9     | 60.5-65.3 |
| P value        |       | 0.154     |           | Southwest  | 1,487        | 51.5     | 48.7-54.4 |
| Employment     |       |           |           | Northwest  | 1,222        | 60.5     | 57.3-63.7 |
| Employed       | 5,239 | 64.2      | 62.7-65.6 | Northeast  | 1,363        | 57.2     | 54.1-60.1 |
| Out of work    | 539   | 42.3      | 37.4-47.4 | Central  | 1,906        | 57.7     | 55.1-60.2 |
| Homemaker      | 684   | 38.9      | 35.0-43.0 | P value  |              | < 0.0001 |           |
| Student        | 205   | 64        | 55.3-71.0 | Marital status   |              |          |           |
| Retired        | 1,450 | 46.5      | 43.7-49.3 | Married  | 4,865        | 57.5     | 56.0-59.0 |
| P value        |       | < 0.0001  |           | Not married  | 3,259        | 59.4     | 57.2-61.6 |
|                |       |           |           | P value  |              | 0.158    |           |

<sup>\*</sup> Reported consuming one or more drinks on at least one day in past 30 days.

Southwest = Carbon, Lincoln, Sweetwater, Sublette, Uinta.

Northwest = Big Horn, Hot Springs, Park, Teton, Washakie.

Northeast = Campbell, Crook, Johnson, Sheridan, Weston.

Central = Converse, Fremont, Natrona, Niobrara.

Totals may not add to 100% (or total) due to rounding (or missing values).

Values rounded to whole numbers if n<500

<sup>95%</sup> CI=range of values within which the true population prevalence would be expected to fall in 95 out of 100 samples taken from the population. P value <0.05 indicates significant association.

<sup>&</sup>lt;sup>1</sup> Ctys >50K = Laramie and Natrona counties; Ctys10K-50K = Albany, Campbell, Fremont, Sheridan, Sweetwater, Teton, and Uinta counties; Ctys <10,000 = all other Wyoming counties.

<sup>&</sup>lt;sup>2</sup> Southeast = Albany, Goshen, Laramie, Platte.

## Table S-2 Heavy Drinking\* WY BRFSS 2003-2004, all adults 18+

|                |       | Heavy drin | ıking    |  |                  | Heavy drii | nking    |
|----------------|-------|------------|----------|--|------------------|------------|----------|
|                | N     | %          | 95% CI   |  | N                | %          | 95% CI   |
| Total          | 8,094 | 5.5        | 5.0-6.1  | Education  |                  |            |          |
|                |       |            |          | <hs< td=""><td>526</td><td>8.3</td><td>5.5-12.4</td></hs<> | 526              | 8.3        | 5.5-12.4 |
| Sex            |       |            |          | HS grad  | 2,637            | 5.6        | 4.6-6.7  |
| Male           | 3,354 | 5.9        | 5.0-6.9  | Some coll.   | 2,636            | 5.6        | 4.7-6.7  |
| Female         | 4,740 | 5.2        | 4.5-6.0  | College grad   | 2,280            | 4.6        | 3.7-5.7  |
| P value        |       | 0.231      |          | P value  |                  | 0.056      |          |
| Age            |       |            |          | Income   |                  |            |          |
| 18-20          | 161   | 7.5        | 4.1-13.3 | <\$25,000  | 2,039            | 6.5        | 5.2-8.0  |
| 21-24          | 370   | 9.4        | 6.8-12.9 | \$25K-\$49,999   | 2,608            | 5.0        | 4.1-6.1  |
| 25-34          | 1,161 | 6.4        | 5.0-8.0  | \$50K-74,999   | 1,412            | 5.7        | 4.4-7.3  |
| 35-44          | 1,420 | 6.4        | 5.1-8.0  | \$75,000+  | 1,254            | 6.0        | 4.7-7.7  |
| 45-54          | 1,920 | 5.0        | 4.1-6.2  | P value  |                  | 0.325      |          |
| 55-64          | 1,348 | 4.7        | 3.7-6.1  | Population dens  | ity <sup>1</sup> |            |          |
| 65+            | 1,666 | 2.2        | 1.6-3.0  | Ctys >50K  | 2,326            | 5.5        | 4.4-6.8  |
| P value        |       | < 0.0001   |          | Ctys 10K-50K   | 3,147            | 6.2        | 5.3-7.3  |
| Race/Ethnicity |       |            |          | Ctys <10,000   | 2,497            | 4.6        | 3.8-5.6  |
| White          | 7,344 | 5.6        | 5.0-6.3  | P value  |                  | 0.106      |          |
| Hispanic       | 355   | 4.2        | 2.4-7.3  | Region <sup>2</sup>  |                  |            |          |
| Other          | 319   | 4.5        | 2.4-8.1  | Southeast  | 2,100            | 5.8        | 4.7-7.1  |
| P value        |       | 0.459      |          | Southwest  | 1,480            | 4.7        | 3.7-6.0  |
| Employment     |       |            |          | Northwest  | 1,219            | 6.0        | 4.7-7.7  |
| Employed       | 5,210 | 6.0        | 5.3-6.8  | Northeast  | 1,357            | 5.0        | 3.8-6.5  |
| Out of work    | 535   | 7.6        | 5.1-11.4 | Central  | 1,889            | 6.0        | 4.7-7.6  |
| Homemaker      | 680   | 3.4        | 2.0-5.5  | P value  |                  | 0.583      |          |
| Student        | 204   | 8.3        | 5.1-13.1 | Marital status   |                  | _          |          |
| Retired        | 1,443 | 2.9        | 2.1-4.0  | Married  | 4,849            | 3.9        | 3.3-4.5  |
| P value        |       | 0.0003     |          | Not married  | 3,229            | 8.7        | 7.4-10.1 |
|                |       |            |          | P value  |                  | < 0.0001   |          |

<sup>\*</sup> Heavy Drinking: >2 drinks per day on average for men, or > 1 drink per day on average for women 95% CI=range of values within which the true population prevalence would be expected to fall in 95 out of 100 samples taken from the population. P value <0.05 indicates significant association.

Southwest = Carbon, Lincoln, Sweetwater, Sublette, Uinta.

Northwest = Big Horn, Hot Springs, Park, Teton, Washakie.

Northeast = Campbell, Crook, Johnson, Sheridan, Weston.

Central = Converse, Fremont, Natrona, Niobrara.

Totals may not add to 100% (or total) due to rounding (or missing values).

<sup>&</sup>lt;sup>1</sup> Ctys >50K = Laramie and Natrona counties; Ctys 10K-50K = Albany, Campbell, Fremont, Sheridan, Sweetwater, Teton, and Uinta counties; Ctys <10,000 = all other Wyoming counties.

<sup>&</sup>lt;sup>2</sup> Southeast = Albany, Goshen, Laramie, Platte.

### Table S-3 Heavy Drinking\* Among Drinkers, WY BRFSS 2003-2004

|                | Heav  | y drinking | /drinkers |  | Hea              | vy drinkiną | g/drinkers |
|----------------|-------|------------|-----------|--|------------------|-------------|------------|
|                | N     | %          | 95% CI    |  | N                | %           | 95% CI     |
| Total          | 4,574 | 9.5        | 8.6-10.6  | Education  |                  |             |            |
|                |       |            |           | <hs< td=""><td>218</td><td>18</td><td>12.3-25.9</td></hs<> | 218              | 18          | 12.3-25.9  |
| Sex            |       |            |           | HS grad  | 1,346            | 10.5        | 8.8-12.6   |
| Male           | 2,152 | 9.2        | 7.9-10.8  | Some coll.   | 1,510            | 9.6         | 8.0-11.4   |
| Female         | 2,422 | 9.9        | 8.6-11.4  | College grad   | 1,495            | 6.9         | 5.6-8.5    |
| P value        |       | 0.536      |           | P value  |                  | 0.0001      |            |
| Age            |       |            |           | Income   |                  |             |            |
| 18-20          | 74    | 16         | 8.8-27.5  | <\$25,000  | 942              | 13          | 10.5-15.9  |
| 21-24          | 257   | 14         | 9.7-18.4  | \$25K-\$49,999   | 1,483            | 8.7         | 7.1-10.5   |
| 25-34          | 755   | 9.6        | 7.6-12.1  | \$50K-74,999   | 900              | 8.8         | 6.9-11.2   |
| 35-44          | 884   | 10.4       | 8.4-12.9  | \$75,000+  | 882              | 8.7         | 6.8-11.0   |
| 45-54          | 1,180 | 8.3        | 6.7-10.2  | P value  |                  | 0.0121      |            |
| 55-64          | 712   | 8.9        | 6.9-11.5  | Population dens  | ity <sup>1</sup> |             |            |
| 65+            | 691   | 5.1        | 3.7-7.1   | Ctys >50K  | 1,369            | 9           | 7.3-11.1   |
| P value        |       | 0.0028     |           | Ctys 10K-50K   | 1,825            | 10.5        | 9.0-12.3   |
| Race/Ethnicity |       |            |           | Ctys <10,000   | 1,311            | 8.6         | 7.1-10.4   |
| White          | 4,162 | 9.7        | 8.7-10.8  | P value  |                  | 0.247       |            |
| Hispanic       | 209   | 7          | 3.9-11.9  | Region <sup>2</sup>  |                  |             |            |
| Other          | 168   | 9          | 4.7-15.2  | Southeast  | 1,267            | 9.2         | 7.5-11.2   |
| P value        |       | 0.457      |           | Southwest  | 755              | 9.2         | 7.3-11.7   |
| Employment     |       |            |           | Northwest  | 707              | 9.9         | 7.7-12.6   |
| Employed       | 3,319 | 9.3        | 8.2-10.5  | Northeast  | 768              | 8.7         | 6.7-11.4   |
| Out of work    | 211   | 18.4       | 12.5-26.3 | Central  | 1,060            | 10.4        | 8.2-13.1   |
| Homemaker      | 258   | 8.7        | 5.3-14.0  | P value  |                  | 0.826       |            |
| Student        | 130   | 13         | 8.1-20.3  | Marital status   |                  |             |            |
| Retired        | 649   | 6.3        | 4.6-8.6   | Married  | 2,764            | 6.7         | 5.8-7.8    |
| P value        |       | 0.0008     |           | Not married  | 1,806            | 14.7        | 12.7-17.0  |
|                |       |            |           | P value  |                  | < 0.0001    |            |

<sup>\*</sup> Heavy Drinking: >2 drinks per day on average for men, or > 1 drink per day on average for women 95% CI=range of values within which the true population prevalence would be expected to fall in 95 out of 100 samples taken from the population. P value <0.05 indicates significant association.

Southwest = Carbon, Lincoln, Sweetwater, Sublette, Uinta.

Northwest = Big Horn, Hot Springs, Park, Teton, Washakie.

Northeast = Campbell, Crook, Johnson, Sheridan, Weston.

Central = Converse, Fremont, Natrona, Niobrara.

Totals may not add to 100% (or total) due to rounding (or missing values).

<sup>&</sup>lt;sup>1</sup> Ctys >50K = Laramie and Natrona counties; Ctys 10K-50K = Albany, Campbell, Fremont, Sheridan, Sweetwater, Teton, and Uinta counties; Ctys <10,000 = all other Wyoming counties.

<sup>&</sup>lt;sup>2</sup> Southeast = Albany, Goshen, Laramie, Platte.

Table S-4
Demographics of Binge Drinkers
WY BRFSS 2003-2004

|   | Non-binge          | drinkers        | Binge dr         | inkers |
|---|--------------------|-----------------|------------------|--------|
|   | %                  | N               | %                | N      |
| Total   | 100                | 6,957           | 100              | 1,163  |
| Sex   |                    |                 |                  |        |
| Males   | 45.4               | 2,595           | 71.9             | 771    |
| Females   | 54.6               | 4,362           | 28.1             | 392    |
| P value   | < 0.0001           |                 |                  |        |
| Age group   |                    |                 |                  |        |
| 18-20   | 4.5                | 117             | 9.2              | 47     |
| 21-24   | 7.4                | 254             | 17.5             | 120    |
| 25-34   | 13.9               | 871             | 24.0             | 296    |
| 35-44   | 18.5               | 1,160           | 20.9             | 266    |
| 45-54   | 21.6               | 1,646           | 18.3             | 272    |
| 55-64   | 15.1               | 1,237           | 7.5              | 116    |
| 65+   | 19.0               | 1,624           | 2.6              | 45     |
| P value   | < 0.0001           |                 |                  |        |
| Education   |                    |                 |                  |        |
| <high school<="" td=""><td>7.2</td><td>469</td><td>7.0</td><td>64</td></high> | 7.2                | 469             | 7.0              | 64     |
| High School   | 33.0               | 2,232           | 36.8             | 414    |
| Some college  | 32.3               | 2,251           | 33.9             | 391    |
| College grad  | 27.5               | 1,989           | 22.2             | 294    |
| P value   | 0.014              |                 |                  |        |
| Married   |                    |                 |                  |        |
| yes   | 68.7               | 4,301           | 49.4             | 557    |
| no  | 31.3               | 2,641           | 50.6             | 605    |
| P value   | < 0.0001           |                 |                  |        |
| Employment  |                    |                 |                  |        |
| Employed/se emp   | 64.2               | 4,291           | 78.3             | 934    |
| Not working   | 6.5                | 469             | 6.2              | 68     |
| Homemaker   | 9.3                | 656             | 2.3              | 28     |
| Student   | 3.5                | 135             | 9.5              | 69     |
| Retired   | 16.5               | 1,385           | 3.7              | 62     |
| P value   | < 0.0001           |                 |                  |        |
| P value < 0.05 indicat  | es significant dif | ference between | n the two groups | •      |

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# Table S-5 Binge Drinking\* WY BRFSS 2003-2004, all adults 18+

|                |       | Binge drin | king      |  |                  | Binge drin | ıking     |
|----------------|-------|------------|-----------|--|------------------|------------|-----------|
|                | N     | %          | 95% CI    |  | N                | %          | 95% CI    |
| Total          | 8,120 | 17.2       | 16.2-18.3 | Education  |                  |            |           |
|                |       |            |           | <hs< td=""><td>533</td><td>16.9</td><td>12.9-21.7</td></hs<> | 533              | 16.9       | 12.9-21.7 |
| Sex            |       |            |           | HS grad  | 2,646            | 18.9       | 17.1-20.8 |
| Male           | 3,366 | 24.8       | 23.1-26.6 | Some coll.   | 2,642            | 18.0       | 16.1-19.9 |
| Female         | 4,754 | 9.6        | 8.6-10.8  | College grad   | 2,283            | 14.4       | 12.8-16.2 |
| P value        |       | < 0.0001   |           | P value  |                  | 0.014      |           |
| Age            |       |            |           | Income   |                  |            |           |
| 18-20          | 164   | 30         | 22.8-38.6 | <\$25,000  | 2,051            | 18.6       | 16.3-21.1 |
| 21-24          | 374   | 33         | 27.9-38.4 | \$25K-\$49,999   | 2,613            | 18.4       | 16.6-20.2 |
| 25-34          | 1,167 | 26.5       | 23.8-29.4 | \$50K-74,999   | 1,416            | 17.0       | 14.8-19.3 |
| 35-44          | 1,426 | 19.1       | 17.0-21.5 | \$75,000+  | 1,252            | 16.3       | 14.1-18.7 |
| 45-54          | 1,918 | 15.0       | 13.3-16.9 | P value  |                  | 0.437      |           |
| 55-64          | 1,353 | 9.3        | 7.7-11.3  | Population dens  | ity <sup>1</sup> |            |           |
| 65+            | 1,669 | 2.8        | 2.0-3.9   | Ctys >50K  | 2,337            | 18.1       | 16.2-20.2 |
| P value        |       | < 0.0001   |           | Ctys 10K-50K   | 3,156            | 18.4       | 16.8-20.2 |
| Race/Ethnicity |       |            |           | Ctys <10,000   | 2,502            | 14.6       | 13.0-16.4 |
| White          | 7,368 | 16.8       | 15.8-17.9 | P value  |                  | 0.0053     |           |
| Hispanic       | 356   | 24         | 18.9-30.6 | Region <sup>2</sup>  |                  |            |           |
| Other          | 320   | 17         | 12.7-23.4 | Southeast  | 2,105            | 19.4       | 17.2-21.7 |
| P value        |       | 0.0167     |           | Southwest  | 1,486            | 16.3       | 14.2-18.6 |
| Employment     |       |            |           | Northwest  | 1,219            | 17.0       | 14.4-19.9 |
| Employed       | 5,225 | 20.3       | 19.0-21.6 | Northeast  | 1,358            | 17.1       | 14.8-19.7 |
| Out of work    | 537   | 16.6       | 12.6-21.5 | Central  | 1,902            | 15.9       | 14.0-18.1 |
| Homemaker      | 684   | 4.8        | 3.1-7.4   | P value  |                  | 0.168      |           |
| Student        | 204   | 37         | 28.9-44.9 | Marital status   |                  |            |           |
| Retired        | 1,447 | 4.4        | 3.4-5.8   | Married  | 4,858            | 13.0       | 12.0-14.1 |
| P value        |       | < 0.0001   |           | Not married  | 3,246            | 25.2       | 23.1-27.4 |
|                |       |            |           | P value  |                  | < 0.0001   |           |

<sup>\*</sup> Binge drinking: 5 or more drinks on an occasion in the past month

Southwest = Carbon, Lincoln, Sweetwater, Sublette, Uinta.

Northwest = Big Horn, Hot Springs, Park, Teton, Washakie.

Northeast = Campbell, Crook, Johnson, Sheridan, Weston.

Central = Converse, Fremont, Natrona, Niobrara.

Totals may not add to 100% (or total) due to rounding (or missing values).

<sup>95%</sup> CI=range of values within which the true population prevalence would be expected to fall in 95 out of 100 samples taken from the population. P value <0.05 indicates significant association.

<sup>&</sup>lt;sup>1</sup> Ctys >50K = Laramie and Natrona counties; Ctys10K-50K = Albany, Campbell, Fremont, Sheridan, Sweetwater, Teton, and Uinta counties; Ctys <10,000 = all other Wyoming counties.

<sup>&</sup>lt;sup>2</sup> Southeast = Albany, Goshen, Laramie, Platte.

Table S-6 Binge Drinking\* Among Drinkers, WY BRFSS 2003-2004

|                | Bing  | e drinking | drinkers/ |  | Bing             | ge drinking | /drinkers |
|----------------|-------|------------|-----------|--|------------------|-------------|-----------|
|                | N     | %          | 95% CI    |  | N                | %           | 95% CI    |
| Total          | 4,600 | 29.7       | 28.1-31.3 | Education  |                  |             |           |
|                |       |            |           | <hs< td=""><td>225</td><td>36</td><td>28.2-43.9</td></hs<> | 225              | 36          | 28.2-43.9 |
| Sex            |       |            |           | HS grad  | 1,355            | 35.6        | 32.6-38.8 |
| Male           | 2,164 | 38.9       | 36.5-41.3 | Some coll.   | 1,516            | 30.6        | 27.8-33.6 |
| Female         | 2,436 | 18.5       | 16.6-20.4 | College grad   | 1,498            | 21.7        | 19.3-24.2 |
| P value        |       | < 0.0001   |           | P value  |                  | < 0.0001    |           |
| Age            |       |            |           | Income   |                  |             |           |
| 18-20          | 77    | 64         | 51.2-74.6 | <\$25,000  | 954              | 36.9        | 33.0-41.1 |
| 21-24          | 261   | 47         | 40.5-53.7 | \$25K-\$49,999   | 1,488            | 31.9        | 29.1-34.8 |
| 25-34          | 761   | 39.9       | 36.2-43.8 | \$50K-74,999   | 904              | 26.2        | 23.1-29.6 |
| 35-44          | 890   | 30.9       | 27.7-34.4 | \$75,000+  | 880              | 23.5        | 20.5-26.9 |
| 45-54          | 1,178 | 24.7       | 22.1-27.6 | P value  |                  | < 0.0001    |           |
| 55-64          | 717   | 17.5       | 14.5-20.9 | Population dens  | ity <sup>1</sup> |             |           |
| 65+            | 694   | 6.6        | 4.8-9.1   | Ctys >50K  | 1,380            | 29.8        | 26.9-32.8 |
| P value        |       | < 0.0001   |           | Ctys 10K-50K   | 1,834            | 31.3        | 28.8-34.0 |
| Race/Ethnicity |       |            |           | Ctys <10,000   | 1,316            | 27.0        | 24.2-29.9 |
| White          | 4,186 | 28.9       | 27.3-30.6 | P value  |                  | 0.0949      |           |
| Hispanic       | 210   | 40         | 31.9-48.2 | Region <sup>2</sup>  |                  |             |           |
| Other          | 169   | 33         | 24.7-42.7 | Southeast  | 1,272            | 30.8        | 27.7-34.1 |
| P value        |       | 0.0168     |           | Southwest  | 761              | 31.6        | 28.0-35.6 |
| Employment     |       |            |           | Northwest  | 707              | 28.1        | 24.2-32.4 |
| Employed       | 3,334 | 31.6       | 29.8-33.5 | Northeast  | 769              | 30.0        | 26.3-34.0 |
| Out of work    | 213   | 39         | 31.2-47.9 | Central  | 1,073            | 27.6        | 24.5-31.1 |
| Homemaker      | 262   | 12         | 8.2-18.4  | P value  |                  | 0.4768      |           |
| Student        | 130   | 58         | 47.3-67.3 | Marital status   |                  |             |           |
| Retired        | 653   | 9.6        | 7.4-12.4  | Married  | 2,773            | 22.7        | 21.0-24.5 |
| P value        |       | < 0.0001   |           | Not married  | 1,823            | 42.5        | 39.5-45.6 |
|                |       |            |           | P value  |                  | < 0.0001    |           |

<sup>\*</sup>Binge drinking: 5 or more drinks on an occasion in the past month

Southwest = Carbon, Lincoln, Sweetwater, Sublette, Uinta.

Northwest = Big Horn, Hot Springs, Park, Teton, Washakie.

Northeast = Campbell, Crook, Johnson, Sheridan, Weston.

Central = Converse, Fremont, Natrona, Niobrara.

Totals may not add to 100% (or total) due to rounding (or missing values).

<sup>95%</sup> CI=range of values within which the true population prevalence would be expected to fall in 95 out of 100 samples taken from the population. P value <0.05 indicates significant association.

 $<sup>^1</sup>$  Ctys >50K = Laramie and Natrona counties; Ctys10K-50K = Albany, Campbell, Fremont, Sheridan, Sweetwater, Teton, and Uinta counties; Ctys <10,000 = all other Wyoming counties.

<sup>&</sup>lt;sup>2</sup> Southeast = Albany, Goshen, Laramie, Platte.

Table S-7 Number of Drinks per Occasion, Binge Drinkers Only WY BRFSS 2003-2004

|  | Numb  | er of drin | ks per bing | e occas | sion*     |      |           |      |           |
|--|-------|------------|-------------|---------|-----------|------|-----------|------|-----------|
|  |       |            | <=5         |         | 6         |      | 7-9       |      | 10+       |
|  | N     | %          | 95% CI      | %       | 95% CI    | %    | 95% CI    | %    | 95% CI    |
| Total  | 1,070 | 30.6       | 27.6-33.8   | 19.3    | 16.8-22.2 | 25.3 | 22.4-28.5 | 24.7 | 21.6-28.1 |
| Sex  |       |            |             |         |           |      |           |      |           |
| Males  | 708   | 27.2       | 23.7-31.1   | 19.9    | 16.8-23.4 | 24.8 | 21.3-28.6 | 28.1 | 24.1-32.4 |
| Females  | 362   | 39         | 33.5-45.0   | 18      | 13.8-22.9 | 27   | 21.5-32.8 | 16   | 12.2-21.2 |
| P value  |       | 0.0003     |             |         |           |      |           |      |           |
| Age (yrs)  |       |            |             |         |           |      |           |      |           |
| 18-29  | 293   | 21         | 15.9-26.6   | 16      | 11.6-21.1 | 30   | 24.2-36.2 | 34   | 27.4-40.5 |
| 30-49  | 527   | 34.2       | 30.0-38.8   | 20.6    | 17.1-24.5 | 23.9 | 20.2-28.1 | 21.3 | 17.6-25.5 |
| 50+  | 249   | 44         | 37.0-50.5   | 24      | 18.7-31.1 | 19   | 13.8-25.0 | 13   | 9.4-18.4  |
| P value  |       | < 0.0001   |             |         |           |      |           |      |           |
| Education  |       |            |             |         |           |      |           |      |           |
| <high school<="" td=""><td>55</td><td>23</td><td>13.2-37.4</td><td>16</td><td>8.2-30.3</td><td>26</td><td>14.6-42.0</td><td>34</td><td>21.1-50.5</td></high> | 55    | 23         | 13.2-37.4   | 16      | 8.2-30.3  | 26   | 14.6-42.0 | 34   | 21.1-50.5 |
| High School  | 376   | 35         | 29.6-40.4   | 14      | 11.0-18.5 | 24   | 18.9-29.0 | 27   | 21.8-33.3 |
| Some college   | 363   | 27         | 22.2-32.8   | 21      | 16.7-26.9 | 25   | 19.8-30.4 | 27   | 21.3-32.9 |
| College grad   | 276   | 31         | 25.3-37.3   | 25      | 19.7-31.2 | 29   | 23.2-35.3 | 15   | 11.0-20.6 |
| P value  |       | 0.0114     |             |         |           |      |           |      |           |
| Income   |       |            |             |         |           |      |           |      |           |
| <\$25K   | 249   | 25         | 19.7-32.0   | 20      | 14.1-26.4 | 30   | 23.0-37.4 | 25   | 18.8-33.5 |
| \$25-<\$49,999   | 381   | 31         | 26.2-36.7   | 16      | 12.8-20.7 | 25   | 20.5-30.2 | 27   | 22.1-33.2 |
| \$50K+   | 382   | 33         | 27.7-37.8   | 23      | 18.8-28.4 | 23   | 18.8-28.3 | 21   | 16.6-26.1 |
| P value  |       | 0.1550     |             |         |           |      |           |      |           |
| Married  |       |            |             |         |           |      |           |      |           |
| Yes  | 519   | 37.3       | 33.0-41.8   | 22.8    | 19.2-27.0 | 20.8 | 17.3-24.8 | 19.0 | 15.5-23.1 |
| No   | 550   | 23.8       | 19.8-28.4   | 15.9    | 12.5-20.0 | 29.9 | 25.2-34.9 | 30.4 | 25.4-35.9 |
| P value  |       | < 0.0001   |             |         |           |      |           |      |           |
| Employment   |       |            |             |         |           |      |           |      |           |
| Employed/se  | 860   | 30.4       | 27.1-34.0   | 20.0    | 17.2-23.2 | 24.8 | 21.7-28.2 | 24.7 | 21.3-28.5 |
| Out of work  | 62    | 35         | 23.0-49.9   | 11      | 4.8-21.9  | 25   | 13.8-41.4 | 29   | 16.8-44.8 |
| Student  | 63    | 19         | 10.0-33.8   | 19      | 9.8-33.0  | 35   | 22.4-49.8 | 27   | 15.8-42.4 |
| Ret/homemkr  | 84    | 47         | 35.9-59.0   | 20      | 11.7-31.0 | 17   | 9.9-26.4  | 17   | 8.8-28.8  |
| P value  |       | 0.1500     |             |         |           |      |           |      |           |

<sup>\*</sup> Respondents were asked about the number of drinks they had during the most recent occasion when they had 5 or more alcoholic beverages. They were asked separately for beer, wine (and wine coolers, hard cider, etc), and liquor, and results were combined. Note that about 7.8% of drinkers classified as binge drinkers reported drinking fewer that 5 alcoholic beverages on this most recent occasion. These respondents were combined with those who indicated they had 5 drinks.

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Table S-8 Number of Binge Drinking Occasions, Binge Drinkers Only WY BRFSS 2003-2004

|  | Numb  | er of occa | sions of bin | ge drir | nking*    |      |           |      |           |
|--|-------|------------|--------------|---------|-----------|------|-----------|------|-----------|
|  |       |            | 1            |         | 2         |      | 3-9       |      | 10+       |
|  | N     | %          | 95% CI       | %       | 95% CI    | %    | 95% CI    | %    | 95% CI    |
| Total  | 1,163 | 36.7       | 33.5-40.1    | 22.7    | 19.9-25.6 | 29.9 | 26.8-33.1 | 10.7 | 8.8-13.0  |
| Sex  |       |            |              |         |           |      |           |      |           |
| Males  | 771   | 33.1       | 29.3-37.2    | 23.3    | 20.0-26.9 | 30.9 | 27.2-34.9 | 12.6 | 10.2-15.6 |
| Females  | 392   | 46         | 40.2-51.8    | 21      | 16.5-26.4 | 27   | 22.3-32.5 | 6    | 3.8-9.2   |
| P value  |       | 0.0004     |              |         |           |      |           |      |           |
| Age (yrs)  |       |            |              |         |           |      |           |      |           |
| 18-29  | 323   | 36         | 29.9-42.2    | 20      | 15.7-26.2 | 33   | 27.4-39.3 | 11   | 7.4-15.2  |
| 30-49  | 576   | 38.5       | 34.2-42.9    | 24.5    | 20.9-28.6 | 27.9 | 24.1-32.1 | 9.1  | 6.8-12.1  |
| 50+  | 263   | 34         | 28.2-41.0    | 23      | 18.1-29.2 | 27   | 21.8-33.8 | 15   | 10.9-20.7 |
| P value  |       | 0.2480     |              |         |           |      |           |      |           |
| Education  |       |            |              |         |           |      |           |      |           |
| <high school<="" td=""><td>64</td><td>30</td><td>18.5-45.1</td><td>13</td><td>5.7-25.5</td><td>35</td><td>22.2-49.4</td><td>23</td><td>12.3-38.2</td></high> | 64    | 30         | 18.5-45.1    | 13      | 5.7-25.5  | 35   | 22.2-49.4 | 23   | 12.3-38.2 |
| High School  | 414   | 32.0       | 27.0-37.4    | 23.0    | 18.6-28.0 | 35.4 | 30.1-41.1 | 9.6  | 7.0-13.1  |
| Some college   | 391   | 39         | 33.6-45.3    | 25      | 19.8-30.2 | 25   | 20.5-30.5 | 11   | 7.9-14.8  |
| College grad   | 294   | 43         | 36.6-49.1    | 22      | 17.4-28.1 | 26   | 21.1-32.4 | 9    | 5.4-13.3  |
| P value  |       | 0.0086     |              |         |           |      |           |      |           |
| Income   |       |            |              |         |           |      |           |      |           |
| <\$25K   | 274   | 37.1       | 30.1-44.8    | 19.0    | 13.7-25.8 | 29.6 | 23.3-36.7 | 14.2 | 10.0-19.8 |
| \$25-<\$49,999   | 413   | 37         | 31.9-42.6    | 23      | 19.1-28.4 | 28   | 23.5-33.6 | 11   | 8.0-15.4  |
| \$50K+   | 404   | 36         | 30.7-40.8    | 25      | 20.4-30.1 | 32   | 27.1-37.4 | 7    | 5.1-10.7  |
| P value  |       | 0.2440     |              |         |           |      |           |      |           |
| Married  |       |            |              |         |           |      |           |      |           |
| Yes  | 557   | 41.5       | 37.2-46.0    | 22.2    | 18.8-26.1 | 28.1 | 24.3-32.3 | 8.1  | 6.0-10.9  |
| No   | 605   | 32.0       | 27.4-37.0    | 23.1    | 19.0-27.7 | 31.6 | 27.0-36.5 | 13.3 | 10.4-17.0 |
| P value  |       | 0.0090     |              |         |           |      |           |      |           |
| Employment   |       |            |              |         |           |      |           |      |           |
| Employed/se  | 934   | 36.4       | 33.0-40.0    | 23.4    | 20.4-26.6 | 30.3 | 27.0-33.9 | 9.9  | 7.9-12.2  |
| Out of work  | 68    | 34         | 20.9-49.2    | 21      | 12.8-33.0 | 30   | 17.7-45.0 | 16   | 6.7-32.6  |
| Student  | 69    | 38         | 25.3-53.5    | 22      | 12.5-35.4 | 28   | 17.3-41.4 | 12   | 5.9-22.5  |
| Ret/homemkr  | 90    | 42         | 30.5-53.6    | 17      | 8.4-30.1  | 26   | 17.6-37.2 | 16   | 9.5-24.9  |
| P value  |       | 0.8830     |              |         |           |      |           |      |           |

<sup>\*</sup> All survey respondents were how many times during the past 30 days they had 5 or more drinks on an occasion. All types of alcoholic beverages were to be considered.

Table S-9
Type of Alcohol Consumed\*, Binge Drinkers Only
WY BRFSS 2003-2004

|   |       | Any      | y beer    | Any      | wine      | Any      | liquor    |
|---|-------|----------|-----------|----------|-----------|----------|-----------|
|   | N     | %        | 95% CI    | %        | 95% CI    | %        | 95% CI    |
| Total   | 1,163 | 86.8     | 84.5-88.8 | 14.3     | 12.0-17.0 | 43.2     | 39.7-46.7 |
| Sex   |       |          |           |          |           |          |           |
| Males   | 771   | 90.2     | 87.6-92.3 | 10.2     | 7.8-13.4  | 39.2     | 35.1-43.5 |
| Females   | 392   | 78       | 73.3-82.5 | 25       | 20.0-30.5 | 53       | 47.4-59.3 |
| P value   |       | < 0.0001 |           | < 0.0001 |           | 0.0001   |           |
| Age (yrs)   |       |          |           |          |           |          |           |
| 18-29   | 323   | 91       | 86.5-93.7 | 15       | 10.4-20.1 | 55       | 48.0-61.3 |
| 30-49   | 576   | 86.1     | 82.7-88.8 | 12.1     | 9.4-15.4  | 35.4     | 31.1-39.9 |
| 50+   | 263   | 80       | 73.9-84.8 | 20       | 14.6-25.7 | 37       | 30.3-43.6 |
| P value   |       | 0.0037   |           | 0.1033   |           | < 0.0001 |           |
| Education   |       |          |           |          |           |          |           |
| <high school<="" td=""><td>64</td><td>87</td><td>73.3-93.8</td><td>18</td><td>9.1-32.3</td><td>45</td><td>30.4-60.1</td></high> | 64    | 87       | 73.3-93.8 | 18       | 9.1-32.3  | 45       | 30.4-60.1 |
| High School   | 414   | 85       | 80.9-88.9 | 11       | 7.7-16.0  | 42       | 36.7-48.3 |
| Some college  | 391   | 91       | 87.4-93.2 | 14       | 10.6-19.1 | 44       | 38.1-50.3 |
| College grad  | 294   | 83       | 78.1-87.6 | 18       | 13.7-24.0 | 43       | 36.2-49.1 |
| P value   |       | 0.074    |           | 0.1944   |           | 0.968    |           |
| Income  |       |          |           |          |           |          |           |
| <\$25K  | 274   | 91       | 86.4-94.0 | 19       | 13.1-25.8 | 47       | 39.8-55.2 |
| \$25-<\$49,999  | 413   | 87       | 83.2-90.6 | 12       | 8.7-16.1  | 44       | 38.1-49.4 |
| \$50K+  | 404   | 84       | 80.3-87.8 | 14       | 11.0-18.4 | 38       | 32.3-43.1 |
| P value   |       | 0.0773   |           | 0.126    |           | 0.096    |           |
| Married   |       |          |           |          |           |          |           |
| Yes   | 557   | 85.1     | 81.8-87.9 | 14.5     | 11.6-18.0 | 34.5     | 30.3-38.9 |
| No  | 605   | 88.5     | 85.1-91.2 | 14.1     | 10.7-18.4 | 51.8     | 46.5-57.0 |
| P value   |       | 0.129    |           | 0.877    |           | < 0.0001 |           |
| Employment  |       |          |           |          |           |          |           |
| Employed/se   | 934   | 87.1     | 84.4-89.3 | 13.1     | 10.7-16.0 | 41.2     | 37.5-45.1 |
| Out of work   | 68    | 81       | 68.2-89.3 | 17       | 9.4-28.6  | 40       | 26.3-55.4 |
| Student   | 69    | 95       | 85.2-98.2 | 14       | 6.4-28.3  | 58       | 43.0-71.6 |
| Ret/homemkr   | 90    | 76       | 64.6-84.3 | 28       | 18.4-40.5 | 48       | 36.2-59.1 |
| P value   |       | 0.0119   |           | 0.0741   |           | 0.076    |           |

<sup>\*</sup> Binge drinkers were asked separately how many beers, wine (or wine drinks) or drinks of liquor they consumed during their most recent binge drinking occasion. These results add to greater than 100% because many binge drinkers reported more than one type of beverage.

Table S-10
Type of Alcohol Consumed, Binge Drinkers Only
WY BRFSS 2003-2004

|  | Type ( | of alcoholic | beverage* |      | 2003-200 <b>-</b> |      |           |      |                     |
|--|--------|--------------|-----------|------|-------------------|------|-----------|------|---------------------|
|  | -JP-   | Beer only    |           | Beer | & liquor          | Wine | or liquor |      | combin-<br>or all 3 |
|  | N      | %            | 95% CI    | %    | 95% CI            | %    | 95% CI    | %    | 95% CI              |
| Total  | 1074   | 48.9         | 45.4-52.4 | 27.6 | 24.4-31.0         | 10.6 | 8.8-12.8  | 12.9 | 10.6-15.6           |
| Sex  |        |              |           |      |                   |      |           |      |                     |
| Males  | 711    | 54.7         | 50.3-58.9 | 27.6 | 23.8-31.8         | 7.8  | 5.9-10.2  | 10   | 7.5-13.2            |
| Females  | 363    | 34           | 29.1-40.2 | 28   | 22.3-33.3         | 18   | 13.9-22.6 | 20   | 15.6-25.8           |
| P value  |        | < 0.0001     |           |      |                   |      |           |      |                     |
| Age (yrs)  |        |              |           |      |                   |      |           |      |                     |
| 18-29  | 294    | 37           | 31.1-44.0 | 41   | 34.8-47.9         | 7    | 4.3-10.6  | 15   | 10.3-20.5           |
| 30-49  | 532    | 57.4         | 52.7-61.9 | 20.3 | 16.8-24.4         | 12.4 | 9.8-15.7  | 9.9  | 7.4-13.1            |
| 50+  | 247    | 54           | 46.6-60.4 | 15   | 11.0-20.7         | 15   | 10.4-20.4 | 17   | 11.8-22.7           |
| P value  |        | < 0.0001     |           |      |                   |      |           |      |                     |
| Education  |        |              |           |      |                   |      |           |      |                     |
| <high school<="" td=""><td>55</td><td>46</td><td>31.5-61.2</td><td>22</td><td>11.5-38.4</td><td>11</td><td>4.7-22.0</td><td>21</td><td>11.0-37.1</td></high> | 55     | 46           | 31.5-61.2 | 22   | 11.5-38.4         | 11   | 4.7-22.0  | 21   | 11.0-37.1           |
| High School  | 375    | 52           | 45.8-57.6 | 25   | 20.2-31.1         | 13   | 9.2-16.6  | 11   | 7.0-15.5            |
| Some college   | 365    | 49           | 42.4-54.7 | 31   | 25.4-37.3         | 7    | 4.9-9.8   | 13   | 9.7-18.2            |
| College grad   | 279    | 46           | 39.3-52.3 | 27   | 21.9-33.5         | 13   | 9.3-18.4  | 14   | 9.5-19.2            |
| P value  |        | 0.20         |           |      |                   |      |           |      |                     |
| Income   |        |              |           |      |                   |      |           |      |                     |
| <\$25K   | 250    | 43           | 35.5-50.8 | 31   | 24.7-39.1         | 7    | 4.6-11.5  | 18   | 12.6-25.7           |
| \$25-<\$49,999   | 379    | 49           | 42.7-54.2 | 31   | 25.6-36.6         | 10   | 7.1-13.8  | 11   | 7.6-15.1            |
| \$50K+   | 385    | 55           | 49.3-60.3 | 22   | 17.2-26.8         | 12   | 9.3-16.0  | 11   | 8.3-15.1            |
| P value  |        | 0.0079       |           |      |                   |      |           |      |                     |
| Married  |        |              |           |      |                   |      |           |      |                     |
| Yes  | 520    | 57.4         | 52.8-61.8 | 18.8 | 15.5-22.8         | 11.5 | 9.1-14.6  | 12.3 | 9.5-15.7            |
| No   | 553    | 40.4         | 35.4-45.7 | 36.3 | 31.2-41.7         | 9.7  | 7.3-12.9  | 13.5 | 10.0-18.0           |
| P value  |        | < 0.0001     |           |      |                   |      |           |      |                     |
| Employment   |        |              |           |      |                   |      |           |      |                     |
| Employed/se  | 865    | 51.2         | 47.4-55.1 | 26.4 | 23.1-30.1         | 10.9 | 8.8-13.3  | 11.5 | 9.1-14.4            |
| Out of work  | 61     | 47           | 32.2-61.8 | 24   | 12.5-39.7         | 14   | 6.9-26.2  | 16   | 8.1-28.7            |
| Student  | 63     | 36           | 23.0-51.2 | 46   | 32.1-60.9         | 3    | 0.8-13.1  | 15   | 6.6-29.1            |
| Ret/homemkr  | 84     | 41           | 30.1-52.4 | 16   | 9.3-25.3          | 17   | 9.7-27.2  | 27   | 17.0-39.6           |
| P value  |        | 0.0017       | . 1 1     |      |                   |      | • 1•1     | 1.   |                     |

<sup>\*</sup> Binge drinkers were asked separately how many beers, wine (or wine drinks) or drinks of liquor they consumed during their most recent binge drinking occasion. Less common responses were combined to result in the 4 categories reported.

Table S-11 Where Alcohol Was Consumed, Binge Drinkers Only WY BRFSS 2003-2004

|  | Locati | on*      |           |      |           |      |            |       |           |
|--|--------|----------|-----------|------|-----------|------|------------|-------|-----------|
|  |        | Home     |           | Othe | rs' home  | Bar, | club, etc. | Other |           |
|  | N      | %        | 95% CI    | %    | 95% CI    | %    | 95% CI     | %     | 95% CI    |
| Total  | 1,104  | 35.9     | 32.6-39.3 | 16.1 | 13.5-19.1 | 37.6 | 34.4-41.0  | 10.4  | 8.6-12.6  |
| Sex  |        |          |           |      |           |      |            |       |           |
| Males  | 731    | 38.5     | 34.5-42.7 | 15.7 | 12.6-19.4 | 34.4 | 30.5-38.4  | 11.4  | 9.1-14.3  |
| Females  | 373    | 29       | 24.1-34.8 | 17   | 12.7-22.6 | 46   | 40.2-52.0  | 8     | 5.3-11.0  |
| P value  |        | 0.0038   |           |      |           |      |            |       |           |
| Age (yrs)  |        |          |           |      |           |      |            |       |           |
| 18-29  | 303    | 26       | 20.3-32.3 | 25   | 19.6-31.4 | 41   | 34.5-47.2  | 8     | 5.5-12.6  |
| 30-49  | 545    | 40.6     | 36.1-45.2 | 10.8 | 8.2-14.2  | 35.9 | 31.7-40.4  | 12.7  | 9.9-16.0  |
| 50+  | 255    | 47       | 40.2-53.7 | 9    | 5.4-14.3  | 35   | 28.9-41.6  | 9     | 6.0-13.8  |
| P value  |        | < 0.0001 |           |      |           |      |            |       |           |
| Education  |        |          |           |      |           |      |            |       |           |
| <high school<="" td=""><td>60</td><td>30</td><td>18.5-44.8</td><td>28</td><td>16.1-45.0</td><td>31</td><td>19.0-47.2</td><td>10</td><td>4.7-20.7</td></high> | 60     | 30       | 18.5-44.8 | 28   | 16.1-45.0 | 31   | 19.0-47.2  | 10    | 4.7-20.7  |
| High School  | 388    | 39       | 33.1-44.5 | 15   | 11.2-20.3 | 35   | 29.8-40.6  | 11    | 8.0-15.3  |
| Some college   | 374    | 34       | 28.9-40.4 | 19   | 14.0-24.5 | 37   | 31.4-43.0  | 10    | 7.0-13.8  |
| College grad   | 282    | 36       | 29.5-41.9 | 9.9  | 6.6-14.5  | 45   | 38.3-51.4  | 10    | 6.9-14.2  |
| P value  |        | 0.0875   |           |      |           |      |            |       |           |
| Income   |        |          |           |      |           |      |            |       |           |
| <\$25K   | 258    | 35       | 27.5-42.4 | 24   | 17.5-31.8 | 37   | 30.1-44.3  | 5     | 2.4-8.4   |
| \$25-<\$49,999   | 391    | 33       | 28.0-38.6 | 12   | 8.3-15.8  | 46   | 39.8-51.3  | 10    | 7.0-13.8  |
| \$50K+   | 391    | 38       | 33.0-43.8 | 15   | 11.5-20.4 | 32   | 27.5-37.3  | 14    | 10.9-18.2 |
| P value  |        | 0.0001   |           |      |           |      |            |       |           |
| Married  |        |          |           |      |           |      |            |       |           |
| Yes  | 533    | 43.6     | 39.1-48.1 | 11.5 | 8.8-14.9  | 31.8 | 27.8-36.2  | 13.1  | 10.4-16.4 |
| No   | 570    | 28.2     | 23.7-33.2 | 20.7 | 16.4-25.7 | 43.4 | 38.3-48.6  | 7.7   | 5.5-10.8  |
| P value  |        | < 0.0001 |           |      |           |      |            |       |           |
| Employment   |        |          |           |      |           |      |            |       |           |
| Employed/se  | 887    | 36.1     | 32.6-39.9 | 13.7 | 11.2-16.7 | 38.5 | 34.9-42.2  | 11.6  | 9.5-14.2  |
| Out of work  | 65     | 43       | 29.1-58.4 | 21   | 10.4-38.2 | 31   | 18.4-46.1  | 5     | 1.2-19.0  |
| Student  | 65     | 22       | 12.4-36.4 | 39   | 25.3-53.8 | 35   | 22.5-49.1  | 5     | 1.3-14.7  |
| Ret/homemkr  | 86     | 48       | 36.3-59.2 | 5    | 2.1-12.4  | 38   | 27.3-50.0  | 9     | 4.6-17.6  |
| P value  |        | 0.0001   |           |      |           |      |            |       |           |

<sup>\*</sup> Binge drinkers were asked "During this most recent occasion, where were you when you did most of your drinking?" Restaurant, bar, club and banquet hall were combined, and park or other public place was combined with "other".

Table S-12 Where Alcohol Was Obtained, Binge Drinkers Only WY BRFSS 2003-2004

|   | How o | btained* |                   |      |             |      |                           |       |          |
|---|-------|----------|-------------------|------|-------------|------|---------------------------|-------|----------|
|   |       |          | one else<br>vided | Boug | ht in Store | -    | ght in bar,<br>urant, etc | Other |          |
|   | N     | %        | 95% CI            | %    | 95% CI      | %    | 95% CI                    | %     | 95% CI   |
| Total   | 1,096 | 17.3     | 14.6-20.5         | 43.1 | 39.7-46.6   | 36.1 | 32.9-39.4                 | 3.4   | 2.5-4.8  |
| Sex   |       |          |                   |      |             |      |                           |       |          |
| Males   | 725   | 16.1     | 12.9-20.0         | 46.1 | 41.8-50.3   | 34.7 | 30.8-38.7                 | 3.1   | 2.1-4.7  |
| Females   | 371   | 20       | 15.6-26.2         | 36   | 30.2-41.5   | 40   | 34.2-45.6                 | 4     | 2.4-7.4  |
| P value   |       | 0.0464   |                   |      |             |      |                           |       |          |
| Age (yrs)   |       |          |                   |      |             |      |                           |       |          |
| 18-29   | 300   | 28       | 22.3-34.7         | 32   | 25.7-38.4   | 36   | 30.1-42.3                 | 4     | 2.5-7.1  |
| 30-49   | 543   | 10.8     | 8.2-14.1          | 49.5 | 45.0-54.1   | 37.1 | 32.7-41.6                 | 2.6   | 1.6-4.4  |
| 50+   | 252   | 10       | 6.0-14.9          | 53   | 45.9-59.5   | 34   | 28.0-40.5                 | 4     | 1.8-7.2  |
| P value   |       | < 0.0001 |                   |      |             |      |                           |       |          |
| Education   |       |          |                   |      |             |      |                           |       |          |
| <high school<="" td=""><td>60</td><td>23</td><td>11.5-40.0</td><td>38</td><td>24.8-53.9</td><td>36</td><td>23.4-50.3</td><td>3</td><td>0.8-12.3</td></high> | 60    | 23       | 11.5-40.0         | 38   | 24.8-53.9   | 36   | 23.4-50.3                 | 3     | 0.8-12.3 |
| High School   | 383   | 15       | 10.8-20.5         | 45   | 39.1-50.7   | 36   | 30.9-41.9                 | 4     | 2.3-6.6  |
| Some college  | 372   | 19       | 14.2-24.6         | 43   | 37.1-49.2   | 35   | 29.9-41.2                 | 3     | 1.5-4.8  |
| College grad  | 281   | 17       | 12.3-23.3         | 42   | 35.7-48.5   | 37   | 31.2-43.7                 | 4     | 1.8-7.4  |
| P value   |       | 0.941    |                   |      |             |      |                           |       |          |
| Income  |       |          |                   |      |             |      |                           |       |          |
| <\$25K  | 257   | 26       | 19.5-33.9         | 40   | 32.3-47.5   | 32   | 25.2-38.4                 | 3     | 1.4-5.9  |
| \$25-<\$49,999  | 389   | 13       | 9.6-18.4          | 40   | 33.8-44.9   | 44   | 37.9-49.3                 | 4     | 2.2-6.6  |
| \$50K+  | 387   | 13       | 9.6-17.8          | 49   | 43.5-54.6   | 35   | 29.7-40.0                 | 3     | 1.8-5.5  |
| P value   |       | 0.0007   |                   |      |             |      |                           |       |          |
| Married   |       |          |                   |      |             |      |                           |       |          |
| Yes   | 530   | 9.8      | 7.4-12.8          | 52.1 | 47.6-56.6   | 33.6 | 29.4-38.0                 | 4.5   | 3.0-6.7  |
| No  | 565   | 24.9     | 20.2-30.2         | 34.1 | 29.3-39.3   | 38.7 | 33.8-43.7                 | 2.3   | 1.3-4.2  |
| P value   |       | < 0.0001 |                   |      |             |      |                           |       |          |
| Employment  |       |          |                   |      |             |      |                           |       |          |
| Employed/se   | 882   | 14.8     | 12.1-18.0         | 43.3 | 39.6-47.1   | 38   | 34.6-41.9                 | 4     | 2.5-5.3  |
| Out of work   | 65    | 23       | 11.7-40.8         | 49   | 34.0-64.0   | 25   | 15.3-38.8                 | 3     | 0.7-8.4  |
| Student   | 63    | 41       | 27.5-56.3         | 33   | 20.2-48.7   | 24   | 14.2-38.2                 | 2     | 0.4-7.5  |
| Ret/homemkr   | 85    | 6        | 2.6-14.2          | 51   | 39.7-62.8   | 38   | 27.6-50.6                 | 4     | 1.3-11.7 |
| P value   |       | < 0.0001 |                   |      |             |      |                           |       |          |

<sup>\*</sup> Binge drinkers were asked "During this most recent occasion, how did you get most of the alcohol?" Responses were not combined.

Table S-13
Drinking and Driving\* Among Drinkers,
WY BRFSS 2004 Only

|                | Drin  | k & drive | drinkers/ |   | Dri              | nk & drive | drinkers/ |
|----------------|-------|-----------|-----------|---|------------------|------------|-----------|
|                | N     | %         | 95% CI    |   | N                | %          | 95% CI    |
| Total          | 2,331 | 4.9       | 3.8-6.2   | Education   |                  |            |           |
|                |       |           |           | <hs< td=""><td>112</td><td>11</td><td>4.8-23.8</td></hs<> | 112              | 11         | 4.8-23.8  |
| Sex            |       |           |           | HS grad   | 687              | 5.8        | 3.7-9.0   |
| Male           | 1,105 | 6.3       | 4.7-8.4   | Some coll.  | 761              | 3.8        | 2.5-5.8   |
| Female         | 1,226 | 3.1       | 2.0-4.8   | College grad  | 768              | 3.9        | 2.6-5.6   |
| P value        |       | 0.008     |           | P value   |                  | 0.049      |           |
| Age            |       |           |           | Income  |                  |            |           |
| 18-20          | 35    | 15        | 5.1-35.1  | <\$25,000   | 461              | 6          | 3.4-10.6  |
| 21-24          | 122   | 9         | 4.6-17.3  | \$25K-\$49,999  | 741              | 5.6        | 3.7-8.6   |
| 25-34          | 390   | 5         | 2.7-7.5   | \$50,000+   | 933              | 4.2        | 2.9-6.0   |
| 35-44          | 445   | 4         | 2.5-7.2   | P value   |                  | 0.491      |           |
| 45-54          | 614   | 4.1       | 2.7-6.2   |   |                  |            |           |
| 55-64          | 365   | 4         | 2.5-6.9   | Population dens   | ity <sup>1</sup> |            |           |
| 65+            | 347   | 1         | 0.4-3.3   | Ctys >50K   | 691              | 5.6        | 3.4-9.1   |
| P value        |       | 0.006     |           | Ctys 10K-50K  | 916              | 4.6        | 3.1-6.7   |
| Race/Ethnicity |       |           |           | Ctys <10,000  | 714              | 4.5        | 3.1-6.4   |
| White          | 2,127 | 4.7       | 3.7-6.1   | P value   |                  | 0.705      |           |
| Hispanic       | 111   | 2         | 0.3-8.0   | Region <sup>2</sup>                                       |                  |            |           |
| Other          | 77    | 10        | 2.8-30.1  | Southeast   | 625              | 3.6        | 2.2-5.8   |
| P value        |       | 0.210     |           | Southwest   | 374              | 4          | 2.6-6.8   |
| Employment     |       |           |           | Northwest   | 372              | 5          | 3.4-8.6   |
| Employed       | 1,701 | 5.1       | 3.9-6.7   | Northeast   | 386              | 4          | 2.3-7.2   |
| Out of work    | 103   | 10        | 3.6-24.9  | Central   | 564              | 6.8        | 3.9-11.5  |
| Homemaker      | 131   | 1         | 0.3-5.2   | P value   |                  | 0.280      |           |
| Student        | 57    | 9         | 3.4-20.1  | Marital status  |                  |            |           |
| Retired        | 333   | 1         | 0.6-3.3   | Married   | 1,424            | 2.9        | 2.1-3.9   |
| P value        |       | 0.026     |           | Not married   | 904              | 8.7        | 6.1-12.2  |
|                |       |           |           | P value   |                  | < 0.0001   |           |

<sup>\*</sup> Driving when they have had perhaps too much to drink (core question asked of all drinkers in 2004) 95% CI=range of values within which the true population prevalence would be expected to fall in 95 out of 100 samples taken from the population. P value <0.05 indicates significant association.

Southwest = Carbon, Lincoln, Sweetwater, Sublette, Uinta.

Northwest = Big Horn, Hot Springs, Park, Teton, Washakie.

Northeast = Campbell, Crook, Johnson, Sheridan, Weston.

Central = Converse, Fremont, Natrona, Niobrara.

Totals may not add to 100% (or 8,173) due to rounding (or missing values).

<sup>&</sup>lt;sup>1</sup> Ctys >50K = Laramie and Natrona counties; Ctys10K-50K = Albany, Campbell, Fremont, Sheridan, Sweetwater, Teton, and Uinta counties; Ctys <10,000 = all other Wyoming counties.

<sup>&</sup>lt;sup>2</sup> Southeast = Albany, Goshen, Laramie, Platte.

Table S-14 Underage and Age 21+ Drinkers Compared WY BRFSS 2003-2004

|   | Age 21+ Age 18-20 (Underage) |      |           |     |    |           |         |
|---|------------------------------|------|-----------|-----|----|-----------|---------|
| <b>Core Questions</b>                                       | N                            | %    | 95% CI    | N   | %  | 95% CI    | P value |
| Any drinking  | 7,927                        | 58.7 | 57.5-60.0 | 164 | 47 | 39.0-55.7 | 0.0075  |
| Binge drinking  | 7,907                        | 16.6 | 15.6-17.6 | 164 | 30 | 22.8-38.6 | 0.0001  |
| Binge drinking among drinkers                               | 4,501                        | 28.2 | 26.7-29.8 | 77  | 64 | 51.2-74.6 | <0.0001 |
| Heavy drinking  | 7,885                        | 5.4  | 4.9-6.0   | 161 | 8  | 4.1-13.3  | 0.306   |
| Heavy drinkers among all drinkers  Drinking & driving (2004 | 4,479                        | 9.3  | 8.3-10.3  | 74  | 16 | 8.8-27.5  | 0.070   |
| only)   | 2,283                        | 4.5  | 3.5-5.7   | 35  | 15 | 5.1-35.1  | 0.023   |
|   |                              |      |           |     |    |           |         |
| <b>Module Questions</b>                                     |                              |      |           |     |    |           |         |
| Any beer  | 1,037                        | 86.0 | 83.6-88.1 | 41  | 96 | 84.2-99.0 | 0.061   |
| Any wine  | 1,061                        | 13.7 | 11.5-16.3 | 44  | 20 | 9.8-37.4  | 0.288   |
| Any liquor  | 1,054                        | 42.3 | 38.9-45.8 | 44  | 52 | 35.6-67.9 | 0.264   |
| Drive after binge   | 1,053                        | 16.2 | 13.9-19.0 | 43  | 7  | 2.1-18.9  | 0.088   |

# Table S-15 Underage and Age 21+ Drinkers Compared WY BRFSS, 2003-2004 Binge Module

| Number of drinks per occasion |                     |            |           |               |           |                |           |             |           |  |  |
|-------------------------------|---------------------|------------|-----------|---------------|-----------|----------------|-----------|-------------|-----------|--|--|
| Group                         | N                   | %          | 95% CI    | %             | 95% CI    | %              | 95% CI    | %           | 95% CI    |  |  |
|                               |                     | <=5        |           | 6             |           | 7-9            |           | 10+         |           |  |  |
| Age 21+                       | 1,028               | 32.6       | 29.5-35.9 | 20.2          | 17.6-23.1 | 24.8           | 21.9-27.9 | 22.4        | 19.5-25.6 |  |  |
| 18-20                         | 41                  | 9          | 3.0-21.6  | 10            | 3.2-27.3  | 32             | 18.2-49.1 | 50          | 33.2-66.5 |  |  |
| P value                       |                     | 0.0005     |           |               |           |                |           |             |           |  |  |
|                               | Number of occasions |            |           |               |           |                |           |             |           |  |  |
|                               | N                   | 1          |           | 2             | 2         |                | 3-9       |             | 10+       |  |  |
| 21+                           | 1,115               | 37.2       | 34.0-40.5 | 22.9          | 20.2-25.8 | 28.8           | 25.9-32.0 | 11.1        | 9.2-13.4  |  |  |
| Age 21+                       | 47                  | 32         | 18.7-48.6 | 21            | 10.6-36.7 | 40             | 26.1-56.1 | 7           | 2.1-22.6  |  |  |
| P value                       |                     | 0.5160     |           |               |           |                |           |             |           |  |  |
| Where alcohol was consumed    |                     |            |           |               |           |                |           |             |           |  |  |
|                               |                     |            |           |               |           | Commercial     |           |             |           |  |  |
|                               | N                   | Home       |           | Others' home  |           | place          |           | Other       |           |  |  |
| Age 21+                       | 1,060               | 37.1       | 33.9-40.5 | 12            | 9.9-14.4  | 40.2           | 36.8-43.6 | 10.7        | 8.8-12.9  |  |  |
| 18-20                         | 43                  | 23         | 11.3-40.6 | 58            | 41.0-73.3 | 12             | 4.6-27.3  | 8           | 2.4-20.9  |  |  |
| P value                       |                     | < 0.0001   |           |               |           |                |           |             |           |  |  |
|                               | Where               | alcohol wa | as bought | •             |           | 1              |           | 1           |           |  |  |
|                               | N                   | Someone    | else      | Store         |           | Bar, etc       |           | Other       |           |  |  |
| Age 21+                       | 1,054               | 12.6       | 10.4-15.3 | 44.6          | 41.2-48.0 | 39.0           | 35.7-42.4 | 3.8         | 2.7-5.2   |  |  |
| 18-20                         | 41                  | 67         | 48.7-81.7 | 27            | 14.0-46.8 | 5              | 1.6-15.7  | 0           |           |  |  |
| P value                       |                     | < 0.0001   |           |               |           |                |           |             |           |  |  |
| Types of alcohol consumed     |                     |            |           |               |           |                |           |             |           |  |  |
|                               | N                   | Beer only  |           | Beer & liquor |           | Wine or liquor |           | Other comb. |           |  |  |
| Age 21+                       | 1,032               | 50.6       | 47.1-54.1 | 26            | 22.9-29.3 | 11.4           | 9.5-13.7  | 12          | 9.9-14.6  |  |  |
| 18-20                         | 41                  | 31         | 16.8-49.1 | 45            | 29.2-61.9 | 2              | 0.3-12.4  | 22          | 10.9-40.6 |  |  |
| P value                       |                     | 0.0053     |           |               |           |                |           |             |           |  |  |

## Table S-16 Smoking and Any Drinking\* WY BRFSS 2003-2004, all adults 18+

|                | Smoking & drinking |          |           |  | Smoking & drinking |          |           |
|----------------|--------------------|----------|-----------|--|--------------------|----------|-----------|
|                | N                  | %        | 95% CI    |  | N                  | %        | 95% CI    |
| Total          | 8,121              | 14.9     | 14.0-15.9 | Education  |                    |          |           |
|                |                    |          |           | <hs< td=""><td>533</td><td>22.3</td><td>18.1-27.1</td></hs<> | 533                | 22.3     | 18.1-27.1 |
| Sex            |                    |          |           | HS grad  | 2,649              | 18.6     | 16.9-20.5 |
| Male           | 3,369              | 16.1     | 14.7-17.6 | Some coll.   | 2,642              | 15.3     | 13.8-16.9 |
| Female         | 4,752              | 13.7     | 12.6-14.9 | College grad   | 2,282              | 8.0      | 6.8-9.3   |
| P value        |                    | 0.010    |           | P value  |                    | < 0.0001 |           |
| Age            |                    |          |           | Income   |                    |          |           |
| 18-20          | 164                | 15       | 10.0-21.6 | <\$25,000  | 2,049              | 19.2     | 17.1-21.5 |
| 21-24          | 374                | 24       | 19.9-29.3 | \$25K-\$49,999   | 2,614              | 16.0     | 14.4-17.7 |
| 25-34          | 1,166              | 21.7     | 19.2-24.5 | \$50K-74,999   | 1,415              | 13.1     | 11.3-15.2 |
| 35-44          | 1,426              | 16.9     | 14.9-19.1 | \$75,000+  | 1,257              | 10.9     | 9.2-12.9  |
| 45-54          | 1,922              | 14.1     | 12.5-15.8 | P value  |                    | < 0.0001 |           |
| 55-64          | 1,351              | 10.2     | 8.5-12.1  | Population density <sup>1</sup>                              |                    |          |           |
| 65+            | 1,669              | 6.0      | 4.8-7.4   | Ctys >50K  | 2,339              | 19.4     | 17.6-21.5 |
| P value        |                    | < 0.0001 |           | Ctys 10K-50K   | 3,156              | 13.2     | 11.9-14.6 |
| Race/Ethnicity |                    |          |           | Ctys <10,000   | 2,503              | 12.8     | 11.3-14.4 |
| White          | 7,371              | 14.4     | 13.4-15.3 | P value  |                    | < 0.0001 |           |
| Hispanic       | 355                | 19       | 14.1-24.3 | Region <sup>2</sup>  |                    |          |           |
| Other          | 319                | 20       | 15.3-25.9 | Southeast  | 2,108              | 16.5     | 14.6-18.5 |
| P value        |                    | 0.019    |           | Southwest  | 1,486              | 12.9     | 11.1-14.9 |
| Employment     |                    |          |           | Northwest  | 1,218              | 11.9     | 9.9-14.3  |
| Employed       | 5,229              | 17.0     | 15.9-18.3 | Northeast  | 1,360              | 15.4     | 13.3-17.7 |
| Out of work    | 538                | 19.8     | 15.9-24.3 | Central  | 1,901              | 16.5     | 14.6-18.6 |
| Homemaker      | 681                | 9.4      | 7.0-12.5  | P value  |                    | 0.004    |           |
| Student        | 204                | 13       | 9.1-19.0  | Marital status   |                    |          |           |
| Retired        | 1,446              | 6.6      | 5.4-8.1   | Married  | 4,856              | 11.9     | 10.9-12.9 |
| P value        |                    | < 0.0001 |           | Not married  | 3,249              | 20.7     | 18.9-22.5 |
|                |                    |          |           | P value  |                    | < 0.0001 |           |

<sup>\*</sup> Current smoking and any drinking in the past month

95% CI=range of values within which the true population prevalence would be expected to fall in 95 out of 100 samples taken from the population. P value <0.05 indicates significant association.

Southwest = Carbon, Lincoln, Sweetwater, Sublette, Uinta.

Northwest = Big Horn, Hot Springs, Park, Teton, Washakie.

Northeast = Campbell, Crook, Johnson, Sheridan, Weston.

Central = Converse, Fremont, Natrona, Niobrara.

Totals may not add to 100% (or total) due to rounding (or missing values).

<sup>&</sup>lt;sup>1</sup> Ctys >50K = Laramie and Natrona counties; Ctys10K-50K = Albany, Campbell, Fremont, Sheridan, Sweetwater, Teton, and Uinta counties; Ctys <10,000 = all other Wyoming counties.

<sup>&</sup>lt;sup>2</sup> Southeast = Albany, Goshen, Laramie, Platte.

## Table S-17 Firearms & Binge Drinking\* WY BRFSS 2004 Only, all adults 18+

|                | Firearms & binge drinking |          |           |   | Firearms & binge drinking |       |           |
|----------------|---------------------------|----------|-----------|---|---------------------------|-------|-----------|
|                | N                         | %        | 95% CI    |   | N                         | %     | 95% CI    |
| Total          | 3,869                     | 11.3     | 10.1-12.7 | Education   |                           |       |           |
|                |                           |          |           | <hs< td=""><td>234</td><td>11</td><td>6.1-18.6</td></hs<> | 234                       | 11    | 6.1-18.6  |
| Sex            |                           |          |           | HS grad   | 1,236                     | 13.1  | 10.9-15.8 |
| Male           | 1,581                     | 17.9     | 15.7-20.4 | Some coll.  | 1,272                     | 10.6  | 8.6-13.1  |
| Female         | 2,288                     | 4.9      | 3.9-6.1   | College grad  | 1,119                     | 10.2  | 8.4-12.4  |
| P value        |                           | < 0.0001 |           | P value   |                           | 0.356 |           |
| Age            |                           |          |           | Income  |                           |       |           |
| 18-20          | 75                        | 18       | 10.0-31.1 | <\$25,000   | 957                       | 9.7   | 7.0-13.1  |
| 21-24          | 166                       | 15       | 9.9-22.7  | \$25K-\$49,999  | 1,238                     | 10.7  | 8.8-13.1  |
| 25-34          | 578                       | 15       | 12.0-18.5 | \$50K-74,999  | 685                       | 15.6  | 12.6-19.1 |
| 35-44          | 674                       | 14.4     | 11.7-17.7 | \$75,000+   | 643                       | 12.3  | 9.7-15.5  |
| 45-54          | 925                       | 12.2     | 10.0-14.9 | P value   |                           | 0.032 |           |
| 55-64          | 635                       | 7.7      | 5.6-10.6  | Population density <sup>1</sup>                           |                           |       |           |
| 65+            | 796                       | 1.4      | 0.7-2.5   | Ctys >50K   | 1,102                     | 10.8  | 8.7-13.4  |
| P value        |                           | < 0.0001 |           | Ctys 10K-50K  | 1,510                     | 11.6  | 9.6-13.8  |
| Race/Ethnicity |                           |          |           | Ctys <10,000  | 1,236                     | 11.6  | 9.5-14.2  |
| White          | 3,529                     | 11.3     | 10.0-12.7 | P value   |                           | 0.871 |           |
| Hispanic       | 175                       | 16       | 10.0-25.1 | Region <sup>2</sup>                                       |                           |       |           |
| Other          | 134                       | 8        | 4.1-16.5  | Southeast   | 1,001                     | 10.1  | 7.8-12.9  |
| P value        |                           | 0.223    |           | Southwest   | 693                       | 9.9   | 7.7-12.6  |
| Employment     |                           |          |           | Northwest   | 591                       | 14.7  | 11.1-19.3 |
| Employed       | 2,519                     | 13.5     | 11.9-15.2 | Northeast   | 647                       | 12.8  | 9.9-16.3  |
| Out of work    | 228                       | 17       | 10.5-25.5 | Central   | 916                       | 10.9  | 8.5-13.8  |
| Homemaker      | 324                       | 2        | 0.9-4.0   | P value   |                           | 0.154 |           |
| Student        | 94                        | 16       | 8.8-28.6  | Marital status  |                           |       |           |
| Retired        | 691                       | 2.8      | 1.6-4.6   | Married   | 2,324                     | 10    | 8.7-11.5  |
| P value        |                           | < 0.0001 |           | Not married   | 1,538                     | 13.9  | 11.4-16.8 |
|                |                           |          |           | P value   |                           | 0.007 |           |
|                |                           | •        | •         |   |                           |       | •         |

<sup>\*</sup> Binge drinking in past month and reported a firearm kept in the home 95% CI=range of values within which the true population prevalence would be expected to fall in 95 out of 100 samples taken from the population. P value <0.05 indicates significant association.

Southwest = Carbon, Lincoln, Sweetwater, Sublette, Uinta.

Northwest = Big Horn, Hot Springs, Park, Teton, Washakie.

Northeast = Campbell, Crook, Johnson, Sheridan, Weston.

Central = Converse, Fremont, Natrona, Niobrara.

Totals may not add to 100% (or total) due to rounding (or missing values).

<sup>&</sup>lt;sup>1</sup> Ctys >50K = Laramie and Natrona counties; Ctys 10K-50K = Albany, Campbell, Fremont, Sheridan, Sweetwater, Teton, and Uinta counties; Ctys <10,000 = all other Wyoming counties.

<sup>&</sup>lt;sup>2</sup> Southeast = Albany, Goshen, Laramie, Platte.

Table S-18
Potential for Pregnancy\*
WY BRFSS 2004 Only, Women age 18-44

|  | Potential for pregnancy |         |           |                     | Potential for pregnancy |       |           |
|--|-------------------------|---------|-----------|---------------------|-------------------------|-------|-----------|
|  | N                       | %       | 95% CI    |                     | N                       | %     | 95% CI    |
| Total  | 892                     | 19.7    | 16.8-23.0 | Income              |                         |       |           |
| Age  |                         |         |           | <\$25,000           | 229                     | 17    | 11.5-23.4 |
| 18-24  | 134                     | 30      | 22.1-38.6 | \$25K-\$49,999      | 298                     | 21    | 16.1-27.1 |
| 25-34  | 352                     | 19      | 15.3-24.2 | \$50K-74,999        | 164                     | 24    | 16.7-32.0 |
| 35-44  | 406                     | 13      | 9.8-16.7  | \$75,000+           | 132                     | 17    | 11.5-25.5 |
| P value  |                         | < 0.001 |           | P value             |                         | 0.437 |           |
| Race/Ethnicity   |                         |         |           | Population dens     | ity <sup>1</sup>        |       |           |
| White  | 807                     | 20.1    | 17.0-23.7 | Ctys >50K           | 252                     | 17    | 12.0-22.7 |
| Hispanic   | 46                      | 15      | 7.1-28.4  | Ctys 10K-50K        | 387                     | 23    | 18.7-28.9 |
| Other  | 31                      | 13      | 5.2-27.0  | Ctys <10,000        | 245                     | 17    | 12.1-23.4 |
| P value  |                         | 0.378   |           | P value             |                         | 0.118 |           |
| Employment   |                         |         |           | Region <sup>2</sup> |                         |       |           |
| Employed   | 647                     | 17.4    | 14.2-21.1 | Southeast           | 224                     | 18    | 12.4-24.4 |
| Out of work  | 55                      | 21      | 9.4-39.8  | Southwest           | 188                     | 20    | 13.6-27.4 |
| Homemaker  | 140                     | 27      | 19.9-36.4 | Northwest           | 120                     | 17    | 9.9-26.8  |
| Student  | 47                      | 24      | 12.3-41.9 | Northeast           | 150                     | 32    | 24.0-41.4 |
| Retired  | 1                       | 100     |           | Central             | 202                     | 15    | 10.2-20.9 |
| P value  |                         | 0.139   |           | P value             |                         | 0.011 |           |
| Education  |                         |         |           | Marital status      |                         |       |           |
| <hs< td=""><td>40</td><td>24</td><td>11.3-45.0</td><td>Married</td><td>571</td><td>23.5</td><td>19.8-27.7</td></hs<> | 40                      | 24      | 11.3-45.0 | Married             | 571                     | 23.5  | 19.8-27.7 |
| HS grad  | 231                     | 22      | 15.9-28.7 | Not married         | 318                     | 12    | 8.1-18.3  |
| Some coll.   | 323                     | 18      | 13.5-23.3 | P value             |                         | 0.002 |           |
| College grad   | 295                     | 19      | 14.7-25.0 |                     |                         |       |           |
| P value  |                         | 0.738   |           |                     |                         |       |           |

<sup>\*</sup> Sexually active women age 18-44 who were either already pregnant or were not using birth control and had not had a hysterectomy

Southwest = Carbon, Lincoln, Sweetwater, Sublette, Uinta.

Northwest = Big Horn, Hot Springs, Park, Teton, Washakie.

Northeast = Campbell, Crook, Johnson, Sheridan, Weston.

Central = Converse, Fremont, Natrona, Niobrara.

Totals may not add to 100% (or total) due to rounding (or missing values).

<sup>95%</sup> CI=range of values within which the true population prevalence would be expected to fall in 95 out of 100 samples taken from the population. P value <0.05 indicates significant association.

<sup>&</sup>lt;sup>1</sup> Ctys >50K = Laramie and Natrona counties; Ctys10K-50K = Albany, Campbell, Fremont, Sheridan, Sweetwater, Teton, and Uinta counties; Ctys <10,000 = all other Wyoming counties.

<sup>&</sup>lt;sup>2</sup> Southeast = Albany, Goshen, Laramie, Platte.

### V. References

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